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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

AGENCY FOR THE CULTIVATOR IN LONDON.—Orders and advertisements for "The Cultivator," are received in London, by P. L. SIMMONDS, Foreign Newspaper Agent, Agricultural Agency Office, 18 Cornhill, opposite the Royal Exchange.

NEW-YORK STATE AG. SOCIETY.

THE next meeting of the Executive Committee of the N. Y. S. Ag. Society, will be held at the Eagle Tavern, Rochester, on Wednesday, the 12th of July, at 9 o'clock, A. M. A full attendance of the Committee, consisting of all the officers of the Society, is particularly requested, as at this meeting the arrangements for the coming Fair will be made, committees and judges appointed, &c. LUTHER TUCKER, Sec'y.

MONTHLY NOTICES.

COMMUNICATIONS have been received during the past month from John M. Harlan, Sanford Howard, A. W. L., M. W. H., H. Watson, J. J. T., A. Subscriber, J. G. Chambers, G. M. Eichelberger, J. W. Thompson, C. N. Bement, P. F. W., D. Z. A. Drummond, K. L., Sam'l Wagner, Alex. McDonald, B. G. Noble.

ACKNOWLEDGMENTS.—During the past month we have received "Useful Works for the People, No. IV," from GEO. JONES, general news agent in this city—a small vol. entitled "Man's artificial Institutions of Agriculture, tested by God's natural Institutions of Agriculture, by JOHN D. WILKINS"—"Journal of the Royal Ag. Society, Part I, vol. IV."—The files of the "New Farmer's Journal," London, for May, and the "Farmer's Herald," Chester, from their respective Editors—"The Farmer's Encyclopedia," Part 9, from CAREY & HART.

"A Friend to Real Improvement," has sent us a description and drawings of a butter table constructed by him the last season. The drawings, we regret to say, are not sufficiently accurate for the engraver. We shall be glad to receive a model of his sowing machine, for the State Ag. Society, when he gets it completed, should it, on being thoroughly tested, equal his expectations.

THE engraving of "J. M. H.'s" drawings would cost more than we can afford to devote to the subject. Where drawings are but imperfectly made, we have to incur a double expense, as we have to get correct drawings made for the engraver. We wish those who send us drawings would bear this in mind.

"F. A. P."—The London Horticultural Society's Catalogue of Fruits, can be obtained of Messrs. Hovey & Co., Boston—price \$2.00.

"A. P."—The Essay came safe to hand, for which accept thanks. There is a book for you at our office. How shall we send it?

J. W. A. S., Curdsville, Va., will accept our thanks for his favor of June 2.

P. F. W.—Thanks for your letter, of which we shall make a good use. You will find your inquiry respecting ringing cattle, answered at page 30, of our last vol.

N. P. BAILEY, Esq., Kingsbridge, will please accept our thanks for his prompt and effectual response to our request.

DOG CHURN.—We are promised a drawing and description of the dog churn used in Orange county, in season for our next, by our friend NIVEN of Newburgh.

ESSEX AG. SOCIETY'S TRANSACTIONS.—We are indebted to the Hon. D. P. KING, Secretary of the Essex (Mass.) Ag. Society, for 12 or 15 nos. of the Transactions of that Society, which have been published annually for the last 15 years. They form an addition to our Library which we prize very highly; as among the papers, are many valuable contributions to agricultural knowledge. The late Timothy Pickering, one of the earliest and most enlightened advocates of agricultural improvement, was, if not the founder, for a long time the President of this Society, and its Transactions embrace many valuable articles from his pen.

ABORTION IN COWS.—It will be seen by a letter in this paper, from Dr. THOMSON, President of the New Castle Ag. Society, Delaware, that his herd, as well as several others in that vicinity, have suffered severely from this cause. As the subject is one of much importance, we shall be glad to receive any facts which may tend to throw light either on the cause or remedy of this evil. We are greatly obliged to S. WAGNER, Esq., for the valuable paper he has furnished us on this subject, translated from the "Allgemeine Land-und-schafliche Zeitung," of Halle.

MR. BATES' SHORT HORNS.—It will be seen by an advertisement in this paper, that Mr. YAIL of Troy, offers for sale several young animals, bred from his importation from the celebrated herd of Thomas Bates, Kirk-leavington, England. Notwithstanding the "hard times," we doubt not the valuable qualities of these animals, as well as the difficulty of obtaining this strain of Short Horn blood, will command for them a ready sale.

DEVON CATTLE.—In company with several of our friends, we had the pleasure, a few days since, of viewing a lot of Devons from the extensive herd of Geo. Paterson, Esq., of Maryland. The lot consisted of a cow, with a bull calf of four months at her side, a yearling bull and a couple of yearling heifers, and were on their way to Black Rock, accompanied by their owner, S. ALLEN, Esq. The cow was imported some years since by Mr. Paterson. The younger animals were all from a bull imported about two years since, from the estate of the Earl of Leicester, and bred by Mr. Bloomfield, the breeder of the fine Devons for which that estate has been so long celebrated, and were all worthy representatives of this highly esteemed herd. The bull calf particularly, was a splendid animal, and will be hard to beat by any breed at the next State Fair, where we shall expect to see the whole lot, and where they will not fail, for their fine forms and popular deep red color, to attract general admiration.

BLACKWOOD'S MAGAZINE.—The June no. of this work was promptly issued from the New World office, New-York, by J. Winchester, by whom it is regularly republished at the extremely low price of \$2.00 a year.

"THE LADY'S PEARL," is the title of a handsome monthly of 24 pages octavo, published at Lowell, Mass., by P. D. & T. S. Edmonds, at \$1.00 a year. It is edited by Mrs. MARY A. FLETCHER, a lady admirably qualified for the task, if we may judge from the July no., the only one we have received. Its original as well as selected articles, are of a far higher character than the mass of those which appear in our more fashionable monthlies. We wish it success.

"USEFUL WORKS FOR THE PEOPLE, No. IV."—We are glad to see that Messrs. GREELY & McELRATH are continuing their series of cheap and valuable publications. This no. contains "Chemistry of the four ancient elements, Fire, Air, Earth and Water, by Thomas Griffiths, lecturer on Chemistry, &c. at St. Bartholomew's Hospital," and the "Book of Philosophical Experiments, by J. S. Dalton," illustrated by some hundreds of engravings and experiments—two as valuable works as could be placed in the hands of those who wish to acquire a knowledge of the elements of chemistry; both essays being intended for those who have not studied the science, and divested as much as possible of technical terms, with the most simple explanations of all such terms as are used. These works are given in a neatly executed pamphlet of 84 pages octavo, closely printed in double columns, for 25 cents.

ENGRAVINGS.—We have the following on hand, waiting for insertion:—Designs for a Laboring Man's Cottage, by T. M. NIVEN—also, from the same gentleman, Plans of outbuildings and grounds, for the Dwelling House published in our January no.—a Gate, by J. Willard—a Bee Hive, by "N. of Washington"—a Sheep Barn, by J. Beach, and several others.

SEED STORE AT NEWARK, N. J.—Our friends in New Jersey, as well as dealers in seeds generally throughout the country, are referred to the advertisement of Messrs. GRASON & RITCHIE, in this paper, of whom seeds of the best quality, and at prices suited to the times, may be obtained.

THE DAIRY—GREAT PRODUCT.—We commence in this paper, the publication of an Essay on the general management of Dairy Cows and the manufacture of Cheese. It was written for, and obtained a premium from, the Herkimer Co. Ag. Society at its last meeting; and is from the pen of a practical man, who gives the results of his own practice and observation for a series of years. As it will occupy portions of two or three nos. of our paper, we will here state that Mr. Fish, the author, has produced by his management, a greater amount of cheese, on an average, from a dairy of twenty cows, than has ever before, to our knowledge, been made, exceeding considerably the large products of those dairies mentioned in our May number. From twenty cows, he made last season, commencing on the 19th of April and closing about the first of January, 13,996 lbs. cheese and 301 lbs. butter, being an average of 714½ lbs. per cow. No better proof surely need be required of the benefits to be derived from a proper care of dairy cows, and a skillful management of their milk. The cheese which received the first prize at the last Fair of the American Institute, was, we believe, from the dairy of Mr. Fish.

DR. CLOUD ON THE CULTURE OF COTTON.—A letter to the Editors, speaking on this subject, says:—"I was surprised to see the system recommended by Dr. C., denounced as humbuggery. I have no idea that such a crop as he obtained, will be often produced; but the PRINCIPLE he goes on is the right one, and is applicable to all crops as well as cotton. Good culture and good manuring, are what is wanted, and these are no humbugs."

AGRICULTURAL IMPLEMENTS.—We invite attention to the advertisement of B. M. FREEBORN, the successor of his father, in the well known establishment of G. Freeborn, New-York, of whom all the most improved farm implements may be obtained.

THE SEASON AND THE CROPS.

WE make the following extracts from letters to the Editors, received during the past month:

Salem, Indiana, May 20:—"Wheat has been injured very materially by the winter, and the crop will probably be less than an average one."

Hannibal, Missouri, May 15:—"We have the most backward spring ever known here. Our wheat crop is literally killed. I know of none that I think can produce ten bushels per acre."

Pope Creek, Mercer co., Illinois, May 17:—"Added to the scarcity of money, and the extreme hard times, and unusual low price of all kinds of products, we have with us this season, another and greater calamity than we have ever before had, in the almost total failure of the wheat crop. There is not, so far as we can yet learn, one acre in fifty of winter wheat, that will pay for harvesting or reimburse the farmer for the seed sown."

Zanesville, Ohio, May 28:—"The season is very backward, but the weather lately has been favorable, and the growth of vegetation rapid. The prospect for wheat is only tolerably good. It suffered much from the winter, excepting the earliest sown."

Iberville, Louisiana, May 29:—"Our crops are full one month behind the usual time. Our cane, that was four feet high on the first of June last year, is now not more than two, and the ratoons a very bad stand. We generally have roasting ears by the first of May; this year we shall have them in about a week from this time. All our early fruit was destroyed in the bloom; garden vegetables we have in abundance, and the weather is now fine for the advancement of vegetation, so that we may yet be blessed with an abundant crop. We have feared an overflow this year, but the Mississippi has not been over the natural banks, and has commenced falling within a few days."

Delavan, Wisconsin, June 7:—"The winter has been very severe; more so than was ever before known. Coarse grains very scarce and high; wheat is becoming so. Winter wheat appears generally very fine, as do all crops except corn and vines."

CATTLE SHOWS THIS YEAR.

GENESEE.—The annual Fair of the Genesee Co. Ag. Society is to be held at Batavia, Oct. 4, 5. From its list of Premiums we are glad to perceive that upwards of a hundred vols. of Agricultural Journals are to be awarded. The LEWIS, MONTGOMERY and STUBBEN Societies, have issued their premium list's, but the times of holding their Fairs are not mentioned.

ONEIDA.—The Fair of this Society is to be held at Vernon, Oct. 5, 6.

ESSEX, MASS.—The Fair of this celebrated Society is to be held at Andover, Sept. 27.

IMPROVEMENT OF DOMESTIC STOCK.

Few things are of more importance to the agricultural interest of a country, than their domestic animals; and any decided improvement in the breeds, forms a solid addition to the productive wealth of a nation. For instance, any change in the character of our cattle, which, by adding to their weight, aptitude to feed, early maturity, &c. should give a gain of twenty per cent on their value, would increase the worth of this item alone about fifty millions of dollars. That such an improvement might be made on the common stock of this country, there are few intelligent men that at the present time will doubt. Facts and experience are most conclusive on this point; and what is true of cattle, will also hold true of all other varieties of domestic animals.

But while most will readily admit the necessity and practicability of improvement, there are some differences of opinion among practical and well informed men as to the best methods of effecting it. Some contend that the only rational prospect of improvement is to be found in introducing foreign stock, and breeding from these, to the exclusion of all native animals. There are others who maintain as strenuously that there is no necessity whatever for any introduction of foreign blood; that we have among ourselves, and in our own herds, all that is necessary to produce as perfect animals as any of the improved breeds of Europe. Others assert that the truth lies midway between these extreme opinions; that the true course is to import valuable animals, if they can be obtained, from abroad, and breed them to our most valuable and choice stock, taking care to select such as are the best adapted to produce any given result or quality. We shall examine these opinions in their order.

Careful and skillful breeding lies at the foundation of all improvement in stock, and this is mainly effected by judicious selections. Color, form, quality and disposition, are all under the control of the breeder. He can equalize and harmonize the whole, or he can develop one point at the expense of the others. It is rare, indeed, perhaps never, that any single point is found in its highest degree of excellence, except at the expense of some other quality. Thus the taking on flesh rapidly, is incompatible, from the very nature of the case, with a copious secretion of milk; and the deepest and best milkers of the herd, may usually be set down as the most raw boned, not to say worst looking of the whole. The reason of this is obvious; the quantity of nutritive matter taken in the food is of necessity limited, and it is impossible for it to perform two offices, or rather be in two places at once. It cannot go to the formation of flesh and fat, and yet be secreted in the form of milk. The term *best*, then, as usually applied, may admit of a different meaning. The best animal for the grazier or butcher, is not necessarily the best for the dairyman; although there are few deep milkers that will not, when the secretion of milk is suspended, take on flesh rapidly—a fact which shows the incompatibility of the two. The best animal, or the one which it should be the object of the breeder to produce, is the one that combines the most valuable qualities, and it is in this sense that the term should be always understood.

The number of those who insist that we are to look to England, and to the produce of importations from that country alone, for the improvement of our stock, is of course limited. There is something absurd in the idea of replacing the ten millions of our native cattle by imported ones, or their progeny, in any reasonable term of years. Besides, had we the means to make the importation, they have not the animals for us. Notwithstanding the attention paid to the breeding of animals in England, the number of the improved animals is still limited; and though cattle to meet any demand might be supplied, such as we should require, or ought to require, could not be had. Great changes in the character of the stock of any country, demand time. It has taken more than two hundred years since Gov. Winslow introduced the first three heifers and one bull into this country, to bring up our stock to its present numbers. This was in 1624; and time would enable us to fill our country with imported stock, were it necessary to wait for such a consummation. As the question, however, relates to present improvement, the idea of depending on importation wholly, must be discarded.

The second position, viz: that we have in our present native herds all the materials necessary for improvement, and that a recurrence to foreign improved breeds is unnecessary, is far more plausible, and has a much greater number of supporters, than the one we have just considered. It is argued, and truly, that all the improved breeds are made up breeds; that it is idle to seek for what may be called an original breed; that the varieties of domestic cattle are depending on climate, crosses, or perhaps in some instances on accidental circumstances; that the improved cattle of England have been bred almost within the memory of man, from old varieties already existing there; that what has been already done, may be done again; and that nothing but the same judgment in selecting animals to breed from, and the same skill and perseverance in following the laws of breeding to their results, is wanting, to produce as valuable stock from our native varieties, as has been produced from the native varieties of England. We have purposely stated this argument in its strongest form; because, while we admit the possibility of producing, in this country, improved breeds equal perhaps in value to those at present existing in Europe, we think it would be the height of folly to undertake the task, in preference to availing ourselves of the labors and skill of European breeders. To make ourselves understood,

we will select the Short Horns or Durhams, as the breed best known, for the purpose of illustration.

We can trace the Short Horns, as a distinct breed, to its originators, Charles and Robert Collings, some fifty years since. Others, as Berry and Coates, co-operated most effectually in forwarding the improvement commenced by them; and within the last twenty years, the number of breeders of this stock has multiplied in every part of England. It cannot be denied that more skill has been exhibited, a greater acquaintance with the true principles of the improvement of stock acquired, and the real points that constitute the value of animals more fully developed in this case, than in any previous instance. Scarcely a variety of domestic cattle can be found, from which animals may not be selected, with one or more points as faultless, and as well developed, as in the improved stock; but in most cases, these valuable points must be considered as accidental, as experience proves there is no certainty of their being continued in their offspring. The science of breeding consists in uniting in one animal as many of these valuable properties as possible, and rendering them constitutional and permanent, so that they may descend to their progeny, or so that the danger of their loss may be avoided. This is what has been done in the case of the Short Horns. That their excellencies are permanent, and fixed in the breed, is proved by their invariably imparting more or less of them to any variety with which they are crossed; that the blemishes and faults occasionally to be found in them, are to be considered as accidental, and not inherent in the breed, is proved by the fact that these defects are rarely propagated, or reproduced in their progeny. It has taken at least fifty years to bring up the Short Horns to this point of excellence; and there is no probability whatever that any modern skill or knowledge could materially shorten this period in grafting these valuable qualities upon the native stock of this country, by simple selection and breeding from our varieties alone. We must, then, to raise up an American breed from native stock only, combining as many valuable qualities as the Short Horns at present possess, employ some fifty years, with much labor and money, and then find ourselves at precisely the point of improvement where the English breeders now are. We think, then, that the advocates of an exclusive American breed, or one produced from our native varieties, without reference to foreign stock, are guilty of as great an absurdity as those who would rely on imported stock only, to replace with an improved stock our native herds.

The third course for improvement is that of those who believe that the best way is, to obtain the best and highest bred animals from abroad, when such can be procured, and breed them to our best and choicest native stock, having reference, in our selection of animals, to those points we consider most desirable in stock, or in which, perhaps, the imported are the most deficient. And this is the method to which we give a decided preference, and to which, it is believed, we must resort and adhere, before any essential change in the character of our stock, generally, will be effected.

There are some who seem to suppose that we are to regard the high bred imported animals as perfect, and incapable, by any skill of breeding, of further improvement. No breeder, however, who has any knowledge of his profession, will view the matter in that light. He sees in the Short Horns, for instance, animals very superior to the common stock of the country; animals that combine a far greater number of valuable points, and are of consequence a decided improvement upon any native breed; but he is far from looking on them or any other breed of cattle as perfect, or incapable of further improvement. On the contrary, he sees in these improved breeds, and these fine imported animals, the basis of still greater improvements; he sees in them, what the labor of the most skillful and careful in England have taken fifty years to accomplish; and instead of going back to the point from which they started, he intends to make the highest vantage ground they have reached his starting point in the career of further progress and improvement.

In breeding from foreign improved stock, it is necessary the American farmer or breeder should pay particular attention to the purity of blood, and the predominating qualities of the animal. The principal value of any improvement in animals, consists in its permanency; indeed, this quality is one of the main things that marks the difference between the high bred imported animal and some few of our native stock. If the improvement is not permanent; if the valuable qualities have not become fixed and constitutional, there is no security that they will be imparted to the progeny, or that the high raised hopes of the breeder may not end in bitter disappointment. It is in determining this question of blood, that the pedigree becomes important; and a reference to the Herd Book will inform the breeder whether he may depend upon stock possessing the qualities of their parents, or leave it to be determined by the event whether that stock shall possess most of the qualities of the Short Horn or the scrub. In regard to the qualities of the imported animals from which we expect improvement to our herds, it appears to us that there are two points that have been sometimes overlooked in making our selections. We have not paid attention enough to their milking properties, or their ability and aptitude to labor. The old Short Horns were the best milking breed in England—a reputation which, as a whole, certainly does not belong to the improved breeds. That there are some superior milkers among

them, is notorious; and that milking deep might be made one of the peculiar characteristics of the breed, no well informed breeder doubts. We very much question, however, whether there is at this time in Europe or in the United States, a herd of any improved stock, Short Horns, Herefords or Devons, from which twenty-five cows can be selected, that would produce as much butter and cheese as the twenty-five native cows mentioned at page 79 of the May Cultivator, or that from the twelve native cows mentioned at page 85 of the same number.* The reason is a plain one; other qualities than deep milking have been principally regarded by their breeders; beef, and not milk, has been the great object. That deep milking can easily be bred into them, no one questions; and this we believe is one of the points that calls for immediate attention. Another point that has not been sufficiently attended to, is aptitude to labor. In this country, very few instances can be found in which high bred animals have been put to the test of labor; but in England, Short Horn bullocks have been subjected to the yoke, and, unless we are misinformed, were found in this respect inferior to the Devons or the Herefords. Indeed, the forms of the animals themselves, indicative of diminished activity and power of locomotion, would lead the observer to expect such a result; and by some it may be considered doubtful whether the aptitude to labor can be engrafted on this stock, unless at the expense of other more important and valuable qualities.

A question, most important to the agricultural interests of the country, is not unfrequently asked, and it is desirable it should be correctly answered; that question is, how can the desired improvements be most certainly and expeditiously made? On this point, we are fortunately not left to theory alone; but we have the result of many experiments, which would seem to be decisive of the matter. In all crosses from a high bred or made up stock, with inferior breeds, there is a constant and powerful tendency to deterioration. Habit is hardly equal to a contest with nature; implanted qualities, unless carefully guarded, are apt to disappear before the powerful tendencies of natural and constitutional ones; and it is to prevent this degeneracy, to retain all the old qualities that are valuable, and add new ones that are desirable, that requires all the skill and caution of the breeder. Man himself, studied physiologically, has furnished some of the most useful lessons which can be offered for the guidance of the modern breeders of animals.

Our opinion as to the true course to be followed, and the one which we doubt not will be generally adopted, is, for the breeder to select a full bred bull of the kind preferred, possessing those qualities most desirable, or indicating that they are inherent in the breed. Much is depending on the proper selection of the male, for it is he that stamps most indelibly his character on the progeny. Ascertain whether the animals from which he is descended, the particular family, we mean, are noted for any particular quality, and what that may be. In the same breed, and of equal purity of blood, animals may be found in which the predominating quality differs essentially. Aptitude to fatten, deep milking, excellence in the yoke, kind handling, &c. &c. may not be prominent in all animals of a breed; and it is for the breeder to select with reference to the qualities, whether of form or color, most desirable. Having secured bulls of undeniable excellence, let the breeder next select from his native stock the best cows he possesses, or that can be procured—those in which the qualities of easy feeding, deep milking and kind dispositions appear to be the most strongly marked and fixed, and breed from such cows only, if he hopes to effect a permanent improvement in his stock. We have never known an instance in which such a cross did not at once mark and change the character of a stock for the better. The cattle shows and fairs of our country prove that these half bloods are far superior to the native stock, in every case, where ordinary attention has been paid to selection in breeding, and that in many instances they have approximated in form and value to the pure blood progenitor. In this first cross, we have rarely known the farmer or breeder to be disappointed; it is in the next and succeeding steps in the progress, from which disappointment has arisen, and this has been occasioned by causes perfectly easy to explain. How often have we heard it said, "our first calves were almost equal to the imported bull, but now they are no better than old fashioned stock." And this was true; for they were nothing but the old stock. Let it be remembered that breeding from crosses, without recurrence to pure blood always degenerates; but where the first cross or half blood is bred to a full blood, a half blood heifer, to a pure blood bull for instance, improvement is sure to follow. The course pursued by many, perhaps most of our farmers is this. A native cow is bred to a pure short horn, and the progeny is a fine bull calf. This calf, a half blood, is used for a bull with his herd of native cows, and the farmer is surprised to find such a falling off in the qualities of his calves from that of their sire. Now the true course would be, if the progeny in the first instance was a bull calf, to fit him for the yoke or the shambles; if a heifer, to breed her to a pure blood bull, and a good calf might be considered certain. By this recurrence to pure blood, the stock will be constantly rising; by breeding from crosses without such recurrence, it will be as certainly sinking.

* In the dairy of 25 cows the product per cow was 561 lbs. of butter and cheese; and of the dairy of 12 cows the product per head was 534 lbs. In both cases the cows had pasture and hay only.

ing. By proceeding in the way here pointed out, using full blood bulls and the best native cows, our stock as a whole would be rapidly improving, and the way prepared for an advance on any of the present breeds.

But it may be doubted by some, whether any improvement on the best of the present high bred cattle, is possible, and the idea of it be scouted as an absurdity. "What," it may be said, "talk of improving a breed by crossing them with those still lower in the scale?" We answer yes, and hope to show there is nothing chimerical in the plan. For illustration, we will again recur to the Short Horns, as unquestionably at the head of the improved breeds. Breeders have enumerated a great number of points as going to make a perfect animal; to make one absolutely perfect, we will suppose that 30 enumerated qualifications are requisite; that the Short Horns, as approaching the nearest to this standard, possess 20 of the desired qualities; and the other varieties or breeds in a descending ratio down to our native stock, which may be put as possessing but five of these requisites. The question is, can an animal possessing 20 good points, be improved by one possessing only 10 or 5? We answer yes, if the one possessing 20 is deficient in any of the points possessed by the lowest, or by 5. 20 may be deficient in hardihood or the power of enduring our seasons; in milking properties adaptation to labor; quality of flesh; or some other point or points, possessed in a remarkable degree by 5; and this deficiency remedied by a skillful cross with 5, which shall engraft and fix the valuable point on 20, would make it 21, or furnish a decided advance towards animal perfection.

The opinions we have advanced in this paper, are not to be considered as mere theory alone; experiment has in a great degree demonstrated their correctness. At our cattle shows, crosses of the improved breeds with our native cattle, have been exhibited, which have placed beyond a doubt the possibility of rapidly improving our stock in this way, and by their superior qualities furnished every incentive to the undertaking. But there must be no breeding downwards; every cross must be upwards both in blood and in desired qualities. We do not say that any animals have yet been produced equal to the finest of the improved breeds, but we believe some might be pointed out that would not suffer materially in a comparison with a great majority of our imported animals, for all the ordinary purposes of the farmer.

Believing as we do, that it is to skillful crossing of the improved pure stocks with our best native animals, we are to look for the earliest as well as the permanent improvement of our herds, and the building up of an American breed worthy of the name, the importance of introducing and preserving animals which shall serve as the basis of this improvement, forces itself upon us at once. It is to the pure blood stock already among us, or which may be introduced, that we must mainly look; and every precaution should be used by the breeders of such stock, and every effort used not only to keep them pure, but to provide for their further advance by skillful breeding, and by the infusion of new blood occasionally, to prevent the enfeebling and degenerating effects of too close in and in breeding. The breeders of improved stock can scarcely attach too much importance to pedigree, as in that alone have they proof of the endurance of the valuable qualities of the animals they breed; and the confidence of the public once shaken on that point, or any deception practiced, will be most unfortunate, as seriously tending to check the improvement of domestic stock. Men who do not look at the subject in all its bearings, are sometimes heard to complain of the prices paid for imported or improved animals, and denounce all efforts at improvement as speculation, or mere money making. We, on the contrary, view the improvement of our domestic stock of all kinds, as an affair of national importance, and think the public spirited individuals engaged in the business are richly deserving the approval and the thanks of the agricultural public. If they are well paid for their labors in the cause of improvement, we shall rejoice at it most sincerely; but we have yet to learn that any American breeder has found his purse grow inconveniently heavy, in consequence of his cattle sales. The men who add as efficiently to the national wealth as they do, are, to say the least, entitled to their share.

SEEDS.

EVERY farmer should as far as possible raise his own seeds, as he will not only thereby avoid a considerable item of expense, but will, if there is proper care and skill used in their production, have such as may be depended upon. There are but very few of the cultivated vegetables and fruits, of which the seeds can be depended upon for the production of plants like the original, if other plants of the same family are permitted to blossom in the immediate vicinity. The cause of this is to be found in the effect which the fertilizing dust or pollen of flowers has on the germs or seeds, when different varieties are placed so near each other that intermixture takes place. It is in fact a real cross, as distinct as that of animals, and with as decided results. For the philosophy of the matter, we must refer to Prof. Lindley's work on Horticulture, or Roget's Animal and Vegetable Physiology. Every farmer or gardener is aware that apples or peaches raised from seeds, are rarely like the fruit that produced them; that melons, squashes, &c. are apt to mix or degenerate, and that where several varieties of corn are planted together, intermixture is certain to take place. We had a fine opportunity of verifying this last result two years since, when we cultivated some

twenty-four or five varieties of corn in a field as an experiment, to test the period of ripening qualities, &c., and the singular manner in which the different colors and qualities were blended, was both curious and instructive. In purchasing seeds from our agricultural seed stores, farmers are very frequently disappointed in the plants produced, a disappointment frequently owing to there not having been sufficient care taken while growing the seeds, in preventing the possibility of intermixture. Beets may be mentioned as an instance of this; as perhaps there are more failures in these seeds, and more instances of degeneracy with these than any others. It may be considered a rare instance of good fortune, if the man who purchases blood beet seeds, does not find when they grow up, that his roots are a coarse unpalatable article, of some shade between red and white, or perhaps yellow, and utterly unlike what he expected. We have found that this result has been prevented, if when the seed beets are set out, and the stalks shoot up, we examine them and select for preservation, those plants, the stems of which are of a deep red color; or when white or yellow are desired, selecting the purest of the kinds, and destroying the others at once. Planting for seed at such distances, that intermixture will not take place in the way pointed out, will also secure the seed from deterioration; but this, except with professed seed growers, is not always convenient. The best way to keep the varieties of early cucumbers, summer and other squashes, &c., when grown as farmers usually produce them in their gardens, is to allow those that set the earliest, and of course nearest the root, to remain for seed. Experience shows that these are less liable to crossing and degeneracy than those that set later, owing perhaps to the number of other blossoms being smaller, and the danger of the fecundating pollen being transported by flies, bees, &c. proportionably less. One thing is clear; seedsmen cannot be too careful as to the quality of the seeds they put in the market. Carelessness as to the kind, or the purity, has an inevitable tendency to destroy all confidence in these necessary establishments, without which it is scarcely possible agriculture should reach the elevated position we trust it is yet destined to reach in this country.

LANCASTER COUNTY, PA.

We make the following extracts from a private letter from a friend at Mount Prospect, near Columbia, dated June 17:

"We have extraordinary weather here so far—a heavy frost on the 2d of June, injuring the potatoes, corn, and garden vegetables. Corn will be short in the stalk with us this year; but short stalks generally bring large ears. I plowed an eight acre field on the 16th, 17th and 18th of May, with four stout horses, often in a trot, plow running twelve inches or more deep, stirring up the ground like a little earthquake, covering under six inches of grass, which had grown through a heavy coat of long manure; and on the 19th and 20th, I planted corn, wetting with strong dung water and rolling in plaster. It came up very black and rich, but the cut worms set to and cut nearly every stalk in the whole field; fortunately for me, the corn was covered much deeper than I wanted it done, and it all sprouted up as fine as ever; but the worms attacked it again, cutting it off the second and third times, and they are at it yet. I replanted the field with sharp sticks, putting a grain in each hole made by the stick, where the worms had cut the corn too near the root. I plastered the corn with a composition new to me, and I suppose to every body else in this neighborhood. I hauled a black substance from the depot at Columbia, which was cleaned out of the steam engines that draw the cars on the railroad—the ashes of bituminous coal, wood, &c. It looks much like fine bituminous coal, but there is considerable wood charcoal in it. I screened the rough particles out and spread it on the barn floor till it became dry. I took of the coal dust about 25 bushels, 10 bushels of leached ashes, 10 of lime, and 6 of plaster, and mixed the whole well together; it was dry enough to absorb about a hoghead of dung water from the cistern, quite thick and dark colored, which I put in. I sowed it along the row pretty thick, and it is astonishing how it made the corn grow. If the cut worm took the stalks off, it would almost rival the orchard grass in growing again. It may be a crop yet, but I doubt it. By plowing deep, the soil got too low for the worms; hence they were more severe on the corn. I have other fields of corn, on which, previous to plowing, I spread long manure, and plastered the manure at the rate of a bushel to the acre; this bids fair to be a crop.

"On the sixth of May, I sowed an orchard broadcast with corn and clover; trees so close that the limbs of one row touch the other; and notwithstanding the constant shade and cold weather, the corn looks well, and is larger than my other corn, and the clover is growing finely. No kind of a crop, except it is orchard grass, can be expected to grow in an orchard so closely set with trees, and it surprises me to see it grow as it does. I can see in places where several trees are missing, that corn and clover are well adapted to sow together, and that the weeds are not more liable to infest it than other grain. If Mr. Drummond would sow good clean land with corn and clover,—about three bushels of corn slightly sprouted, and a peck of clover seed, swelled and rolled in plaster, to the acre, and harrow and use the roller as it should be done, I shall be much mistaken if the weeds get the better of the clover. If they do, it must be very foul land. I have a field of corn, which I in-

tend, after passing the cultivator through the last time, to sow with clover for pasture.

"I have some doubts about the wheat crop. I rode about thirty miles through this county, and it is evident to me that it will be tight squeezing to be two-thirds of a crop. The wheat generally looks too dark and broad in the leaf, especially in the limestone land. I have elegant wheat, twenty-three acres, which will average twenty-five bushels—some acres will overrun thirty, but it will take it to make up for wet spots where it is thin. If our farmers would use long manure first for corn, and then wheat, instead of putting it directly on wheat, they could raise better crops; but it is unpleasant to work among long manure, and our farmers hate it as much to plow when the plow chokes, as they dislike to read agricultural papers. Lancaster county has a host of good farmers, I admit, but they might still be better if they were not so much prejudiced against book farming, as they call it, and would be willing to read and judge for themselves."

PREMIUMS OF THE MASS. STATE AG. SOCIETY.

As a matter of interest to many of our readers and subscribers, we condense from the columns of the N. E. Farmer, the Premium List offered by that flourishing Society for the present year. The trustees of the Society give notice that they shall again omit for the ensuing year, their Cattle Show at Brighton, and that the state premiums will be awarded to any stock, &c., at the annual show of the Hampshire, Franklin, and Hampden Agricultural Society, in the autumn of 1843. By combining the influence and premiums of the State Society with the County or local associations, more interest it is believed will be excited, and the benefits of the institution more extensively felt than before. We think the dwellers in the beautiful valley of the Connecticut, may count with safety on one of the most imposing and splendid exhibitions that have ever taken place in this country. The New-York State Society, and our friends of the Genesee valley, must look well to their laurels.

\$100 is to be divided in premiums among the following descriptions of stock, viz:—Best full blood, and best native Bull,—best full blood and best native Heifer, milked not less than three months, quantity and quality of milk to be considered,—best yearling full blood Heifer,—best pair working Oxen, and best pair three year old Steers.

For the best farm of not less than 70 acres, to which no premium has been before given, \$200,—second best \$150,—third best \$75,—fourth best \$50, and fifth best \$25. These premiums are on a liberal scale, and we doubt not will find numerous competitors. Farms offered for premium will be visited by the trustees, or an agent, which will save the proprietor the trouble of furnishing an account of his farm. In the meantime he is provided with a series of questions, 33 in number, relating to his farm, its management, &c. which he is to answer to the best of his ability, and which experience shows, will be the means of eliciting much useful information for the public. These questions are arranged with great care and skill, and embrace most of the important topics of farming, as practiced in New England.

For the best rotation of crops, on not less than 2 acres, and for 3 or 4 years, commencing when in grass, \$75. A full history of the culture during this time is required.

For the best acre of Carrots, orange or white, \$40,—best acre of Mangel wurtzel, \$30,—best acre of Sugar Beet, \$30,—best acre of Ruta Baga, \$20,—best acre of Cabbages, \$20. For the best half acre of each of these, one half the sum named per each acre.

For the greatest quantity of vegetables raised, (grain, peas, and beans excepted,) regard also being had to value, and expense of cultivation, \$30.

For the most successful experiment in the improvement of pasture grounds, \$30.

For the best experiment in draining and reclaiming wet lands, not less than 3 acres, \$50.

For the most satisfactory experiment with green crops as a manure, \$50.

For the best newly invented or improved agricultural implement, from \$10 to \$50.

For the best mode of rearing, feeding, and fattening cattle, \$20.

For the best conducted experiment on the use of lime as a manure, \$50.

For the best experiment with bone manure, \$20.

For the best improvement on the common subsoil plow, \$50.

For the best form for a farmer's Diary and Account Book, \$30.

For the best apple orchard, \$50; second best, \$30.

For the best practical treatise on injurious insects, \$100. Claims for the premium on Crops, Manures, Experiments and Inventions, with the required evidences, must be sent free of expense, to BENJ. GUILD, Esq. Boston, on or before the first of December next. All premiums awarded will be paid on demand.

Massachusetts, it will be seen, takes the field strongly; and the experience of this, her leading Society, fully justifies the movement. The Old Bay State deserves much credit for her legislative aid to agriculture, and the result shows that the seed she has so liberally sown, has fallen into a rich and productive soil. Massachusetts knows, and is willing to trust her farmers; let other states profit by her example.

Take things always by their smooth handle.
That life is long which answers life's great ends.

FOREIGN INTELLIGENCE.

In Europe, as in this country, there is a constant improvement in the character of the periodicals devoted to the interests of Agriculture, as regards both its science and practice. In perusing the valuable papers which appear in the Journal of the Royal Ag. Society, Qr. Journal of Agriculture, Farmer's Mag., New Farmer's Journal, &c., we feel a deep regret that we cannot invite our readers to the same rich banquet, and we have been often tempted to commence a Journal of Foreign Agriculture, which should embrace the most important papers of the foreign magazines. We cannot but think, that a work of this kind, with a capable conductor, would meet with ample support. From our late files of foreign papers we have compiled the following items:

MR. COLMAN.—At a special meeting of the Council of the Royal Agricultural Society on the 11th of May, Mr. COLMAN was present, and took his seat as an honorary member. At a subsequent meeting Mr. Colman addressed the meeting, thanking them for having made him an honorary member of the Society. He also presented the Society copies of Prof. Hitchcock's Geology of Massachusetts—three of his Reports on the Agriculture of Massachusetts—Mr. Ellsworth's Report to Congress last winter—the annual report of the Monroe Ag. Society; and on behalf of Dr. Mease of Philadelphia, the last vol. of the Memoirs of the Phil. Ag. Society, for which the Society voted him "their best thanks."

ABORTION.—An instance similar to the one mentioned in our last, as having occurred in the herd of Mr. Prentice at Mount Hope, is mentioned in the Dublin Farmer's Gazette. A correspondent states that he "has a valuable stock of ten milch cows; that four of them calved safely, but within the last six weeks five have in close succession slipped their calves, and the remaining one has every appearance of doing so." In answer to the call for information as to the best means of preventing a recurrence of this calamity, the editor of the Gazette says: "A case similar to the above appeared in this journal a short time since, which we hoped would have attracted the attention of some person capable of giving a reasonable cause for so distressing a calamity, and of recommending some means of preventing its recurrence, but hitherto we are sorry to say it has failed to do so."

ROYAL AG. SOCIETY OF ENGLAND.—This Society has now 7,270 members, of which 101 are denominated life governors, who pay \$250 each—206 annual governors, who pay \$25 annually—399 life members who pay \$50 each—6,551 annual members, who pay \$5 per annum. Its receipts in the three years of its existence, have so far exceeded its expenses that the Society has invested about \$35,000, the interest of which now forms a part of its permanent income. The Fair of this Society, for this year, is to be held at Derby, commencing on the 11th of this month.

MANURES.—At the present time there is no subject attracting, deservedly too, more attention than that of the preparation and increase of manures. A large portion of the articles in the May No. of the Farmer's Magazine, are devoted to this subject. It is stated that one ton of straw will make three tons of manure, and that a cow will produce about nine tons of solid manure in the course of the year. In an experiment by Mr. Barton in Stafford, in the culture of wheat, the increase in the value of the product of an acre, over that of an acre without any manure, was as follows:

1½ cwt. of guano per acre,	\$15.32
1½ cwt. guano and nitrate of soda, in equal parts,	11.84
1½ cwt. nitrate of soda,	7.13
4 tons caustic lime,	9.49
Lime and salt, mixed,	none.

In several experiments made in Scotland, in raising turneps, the guano appeared to equal advantage in comparison with dung and with bone dust, the latter being the best fertilizer heretofore used for turneps.

SALT AND LIME FOR GRASS LANDS.—A correspondent of the Mark Lane Express, says that he has "found great benefit from sowing two bushels of lime mixed with one of salt, at the rate of twelve bushels per acre. If more is sown it has a bad effect; in fact, it would destroy rather than improve the quality of the herbage. I have always found my given quantity very effective in enriching as well as increasing the quantity."

BONE DUST.—Great quantities of bones are every year shipped from this country to England, to be ground and used as manure, principally for the turnep crop, for which bone dust is found to be the best of all manures. We see it stated that the sum of \$50,000 has been paid in a year, by the single district of Strathmore, for bone dust. It is used on dry or calcareous soils, and is considered inefficacious on heavy clay soils.

CHARCOAL.—A correspondent of the New Farmer's Journal, states that during a sojourn in one of the central departments of France, he learned that one of the most productive farms in the neighborhood was originally very sterile; but the proprietor having some years before given it a light dressing of charcoal, from that time it yielded crops exceedingly fine both in quality and quantity. On his return to England, he determined to try the experiment on his own lands, and the result proved highly satisfactory. He says:—"After various experiments I ascertained that before applying the charcoal it should be crushed, when it may be spread over the land like lime, but as soon as possible afterwards it should be well moistened with soft water, by means of a watering cart. The expense per acre, is a mere trifle, in comparison with

the permanent improvement effected, which on grass land is truly wonderful. But this is not all. I am quite satisfied that by using charcoal in the way described, rust in the wheat crop will be effectually prevented; for I have found that in two adjoining fields, one of which was 'coaled,' and the other manured with farm-yard dung, the wheat in the latter was greatly injured by rust, whilst that growing in the other was perfectly free from it."

EXPERIMENT tried on three years old pasture in Scotland, by Wilson, of Auchiniden, furnished to the Philosophical Society of Glasgow. Two hundred perches were divided into ten lots, of twenty perches each, and treated as follows, yielded the following produce:

Lot 1—Left untouched,	420 lbs.
2—2½ bbls. of Irish quick lime,	602
3—4 cwt. lime from Lias works,	651
4—4½ cwt. wood charcoal powder, ..	665
5—2 bushels bone dust,	693
6—18 lbs. nitrate potash,	742
7—20 lbs. nitrate soda,	784
8—12½ bushels soot, (equal to 4 bush.)	819
9—28 lbs. sulphate ammonia,	874
10—100 gal. ammonia liquor, from Lias works, at 5 deg. Tweddle, ...	945

The value of the applications was 5s. for each lot, or at the rate of 21. per Scotch acre. All the articles were applied on the 16th of April, 1841. The grass cut and made into hay in the following July.

GUANO.—At a meeting of the Royal Ag. Society, on the 10th of May, Mr. Davenport communicated the following results of trials made the last year, with guano, on his farm:

"On Meadow.—One acre sown with 3 cwt. of guano and 3 cwt. of gypsum: crops when ready to stack, 2 tons 18 cwt.

"One acre sown with 2 cwt. of guano and 2 cwt. of gypsum: 2 tons, 8 cwt.

"One acre sown with 2 cwt. of guano only: 2 tons.

"Turneps.—One acre of turneps, 4 cwt. of guano, and 4 cwt. of gypsum: 30 tons produce.

"One acre of turneps, 2 cwt. of guano and 2 cwt. of gypsum: 27 tons.

"The difference between an unmanured acre, and one manured with 3 cwt. of guano and the same quantity of gypsum, was 27 cwt. of hay additional.

"The guano was of the best kind, which now sells at 10s. the ton. Its effects on green-house plants, when sufficiently diluted, is great, but it is easy to do mischief by excess. Water is the best vehicle. When sown, it should be in showery weather. Altogether, it appears to be the cheapest manure known, and strong soils suit it best."

AMERICAN FLOUR AND PORK.—After the passage of the late Corn Laws, by which provisions from the United States were admitted into Great Britain at such a duty as to admit of their shipment to a limited extent, it became very fashionable for the sticklers for the corn laws in England, to denounce them as unfit food for honest John Bull, and especially was our pork,—which was said to be fattened upon sheep which died for want of ruta bagas, which could not be raised here,—looked upon with abhorrence. Now, however, when it is feared that amendments will be made to the corn laws, still more favorable to the introduction of American produce, the tune is changed, and all at once our flour and pork become the best in the world. At a corn law meeting at Chelmsford, one speaker pronounced our wheat a very superior article—so hard and fine that it may be shipped to any part of the world, and kept a twelve month without danger of sweating. Mr. Grove said, "the quality of American flour was so superior to our own, that it would take as much more water, and the duty being 1s. only, would make the sack of flour at a premium." Mr. Du Croz said, "the American pork is the best in the world; it is principally fattened on maize, and at certain periods of the year nothing can be finer."

SOILING.—The practice of soiling is recommended by the Rugely Farmer's Club, 1st, for the extra quantity of manure that can be made: 2d, the saving of food. These they consider are equivalent to the expense. The Wirral Farmer's Club adopted the following resolution:—

"That it is the opinion of this meeting that the best method of feeding farm horses and other cattle upon the green produce of the farm, is by mowing and feeding in the yards, commonly termed soiling, and at the commencement of the season to cut it with a portion of hay into chaff. And for horses, lucerne is strongly recommended for its substantial quality, and as yielding early and successive crops, and being exceedingly healthy and nutritious food."

HORSE CARTS.—"I should add," says Mr. P., "that on these 1500 acres no wagon is used. The harvest is brought home, and the manure carried out upon single horse carts; nor in this respect is there any departure from the practice of the neighborhood, for I find that in Bedfordshire, and part of Herefordshire, the farmers use nothing else."

THE TURNER FLY.—A 'Tanner' in the London Farmers' Magazine, describes the manner in which he exterminated the fly, on a patch of turneps in his garden. The seed came up well, but was attacked by myriads of the fly, and when noticed by him, half the plants were destroyed. He immediately applied for a remedy some stale liquid from the lime pit in his tanner's yard. The application was effectual, and the next day scarcely a fly was to be seen, and not one on the plants visited by the contents of the water-pot. He was apprehensive at first that the effect of the liquor might be fatal to his plants,

but a rain washed off this sprinkling of lime and animal matter in combination, and the plants instead of suffering grew with rank luxuriance. He was induced to apply this liquid from having observed that however stale and fetid, animal life could not exist in it. All farmers who are troubled with insects on their vegetables may not have access to a tanner's lime vat, but he may prepare a vat with a few bushels of lime and water, or still better the wash of his yards, and into this let all refuse animal matter he may have about the farm, dead lambs, pigs, fowls, sheep, or all carrion, be cast, or the entrails of what are killed for use, and he will soon have a preparation equal in efficiency as a preventive of insects, or as a manure, to the tanner's liquid. This is a matter which should arrest the attention of all farmers, as by it nuisances are converted into useful matters, and the farm kept free from their existence.

TURNER FLY.—I have found that lime lightly strewed over turneps (just up) before the dew is off the ground in the morning, most effectually and invariably preserves the crop from the fly, &c.—*Cor. of New Farm. Journal.*

WINTER FEED OF COWS IN FLANDERS.—The cows are principally fed on roots, such as carrots, turneps and potatoes. These are chopped up together in a tub, and some bean meal, rye meal, or buckwheat meal is added; boiling water is poured over this and allowed to cool, or the whole is boiled together in a copper, when fuel is not too scarce. Of this mixture, called *brassin*, two pails are given milk warm, morning and evening, to each cow; and this, with a little wheat or barley straw, is their only food during the whole winter.

IRISH AG. SOCIETIES.—Following the example of England, a National Ag. Society was formed in Ireland in 1841, since which no less than 83 auxiliary or district Societies have been organized, all of which appear to be in a prosperous condition, and exerting a highly salutary influence on the agricultural interest of that country.

THE RATTLESNAKE.—At the monthly meeting of the Highland and Ag. Society for May, Professor Traill referred to the singular property attributed to the white ash, of driving away rattlesnakes. In an experiment made to test the reality of this alleged property, it was found that when a branch of some other tree was presented to a rattlesnake, it merely had the effect of irritating the reptile, and causing it to dart forward as if to resent the annoyance; but no sooner was a branch of the white ash thrust against it, than it showed symptoms of the greatest uneasiness, made an effort to escape, and seemed paralyzed in all its motions. This was repeated so often as to leave no doubt about the remarkable effect of this tree on the rattlesnake.

A NEW CHURN.—It having been found by experiment, that the greatest quantity of the finest quality of butter is obtained from cream at a mean temperature of 55° Fahrenheit, Mr. David Ritchie of Edinburgh, has made a churn which seems well calculated to accomplish the object of keeping the temperature of the cream at the desired point. It consists of one cylinder placed concentric within another, so that water, either cold or hot, as the case may require, may be put into the outer cylinder.

FEEDING POULTRY.—Prof. Gregory of Aberdeen, observes, "As you keep poultry, I may tell you that it has been ascertained that if you mix with their food a sufficient quantity of egg shells or chalk, which they eat greedily, they will lay, *ceteris paribus*, twice or thrice as many eggs as before. A well fed fowl is disposed to lay a vast number of eggs, but cannot do so without the materials for the shells, however nourishing in other respects her food may be; indeed, a fowl fed on food and water, free from carbonate of lime, and not finding any in the soil, or in the shape of mortar, which they often eat on the walls, would lay no eggs at all."

LAND IN SIGHT.

We believe that there has not been a time, since the general tumble down of prices, and the consequent agricultural distress, when the prospect of relief was so fair as at present. Farmers have been gradually, but certainly, surmounting their difficulties, and already they begin to breathe more freely. Driven to retrenchment and economy, what at first seemed an evil, is found to have been a positive good to all classes of society; and if the severe lessons the community have been taught have their proper effect, we shall find many days of prosperity are yet before us. Debts heedlessly contracted, and without any rational expectations of meeting them, were the great cause of our personal or individual difficulties. The farmer has been slowly working his way out of these; and now better prices for his produce is coming to his aid, to complete the work. We would not intimate that the prices of 1837 are to be expected. They ought not to be desired, as they are inconsistent with a healthy and safe condition of things; but every thing indicates a gradual restoration of confidence, and prices that will be remunerating. We now as a nation sell more than we buy; our manufactures are getting into successful operation; new markets are opening for our agricultural products; specie instead of gewgaws is flowing in upon us; money is becoming plenty for those who have anything to purchase it with; and there is a general feeling that the "dark day" is at last passed. We have only to avoid the errors of the past; to see our way clear before us; and as a nation or as individuals to purchase nothing we do not need, and pay down for what we do purchase, and we may reasonably hope, that if we do not become rich, we shall not be obliged to incur the disgrace of repudiation.

CANADA THISTLES—ABORTION IN COWS.

Messrs. GAYLORD & TUCKER—By the enclosed slip from one of our papers, you will perceive some of the farmers of Delaware have become much alarmed at the appearance of that pest, the "Canada Thistle," upon our lands.

From occasional articles in the Cultivator, I find a difference of opinion as to its treatment, and mode of ridding the ground of it. To us, in this portion of the middle States, it is comparatively a stranger, and from this cause has slipped in here and there, and if not immediately attended to, we apprehend it will spread with much rapidity.

We have pretty effectually succeeded in alarming our agricultural friends for an attack upon it, and having promised them the best light I could obtain on the subject, with a view of laying it before them, I must appeal to you and one or two northern friends, to advise me, in your opinion, the most approved plan of rooting out and preventing its return. On this subject we shall be pleased to hear from you at your earliest convenience.

I have just received the June No. of your valuable paper; it well sustains its high character and credit. Your notice of the death of our valued friend, JAMES GARNETT, is highly appropriate. At this time, in the great revolution that is now going on in agriculture in the United States, this valued and general officer and leader will be much missed. Whilst we revere his memory, commemorate his worth, and revert to his useful life, let us not despair that other "Commentators" will arise, and fill up the gap that is now made. Peters, Buel, and Garnett, all ripe and well filled shocks, are gathered and garnered away, and their last furrow has been turned, but the seed they have sown will spring up and continue to flourish to the latest time.

The article "Abortion in Cows," is at this time, in our country, of deep interest. Let this mysterious matter be kept before the intelligent husbandmen of the U. States. I do not know that the real cause is yet at all discovered. Certain it is, that as an epidemic it becomes an alarming thing to the owners of favorite animals and whole herds of cattle. We ourselves have suffered severely within the last year from this identical result, in a herd of 80 or 90 Devon N. York cows, kept for the purpose of a vealery; some 20 or 25 slipped their calves last spring, all in good condition and had been well wintered; this spring the same calamitous results have obtained, and I am now certain that the only remedy to prevent its spread among the herd, is immediately to remove the animal from your farm and neighborhood—of course to find out and bury or put out of the way, the dead fetus and all the secondaries, and to feed off all cows and heifers that are at all addicted to abortion; for where one cow aborts, it is directly perceptible by instinct—this sense of smell, or some cause not yet fully ascertained—the sympathy of the whole dairy is aroused—an unnatural fever rages amongst them—cows with calf again seek the bull, or are constantly seen jumping each other; an unnatural state of excitement thus brought on, will account in many cases for the frequent miscarriages, when in fact little or no disease prevails; and from the experience I have had, (too much, to my sorrow,) I have detected no ill-conditioned health in the animal, beyond temporary excitement and slight uterine inflammation, previous to and just after the abortion. Still I have no doubt there are many sporadic cases of abortion among cows, from a diseased state of body, from some organic defect, or poor keeping, or noxious food or weeds. But from what I have seen so far, my views are to get rid at once—be they high priced Durham, the favorite Devon, or the lowly esteemed cattle—if they abort, turn them off and look to a new stock altogether. I am exceedingly sorry to hear of Mr. Prentice's losses; several large dairymen near Philadelphia have suffered likewise within the last year, and I hope considerable attention is being turned to the subject by practical and intelligent men, and that ere long the true causes of abortion among cows, as well as brood mares, (and I think they will be found to be nearly the same,) will be fully ascertained, and thus much that is valuable and highly prized among us, be saved from loss and destruction. But I have entirely digressed from the true object of this letter, which is simply to ask your views and best experience of yourself and correspondents, on the destruction and eradication of the "Canada Thistle." JAMES W. THOMSON, Pres't New Castle Ag. Society.

Newcastle, Del., June 15, 1843.

The remarks in the above communication on the subject of abortion in cows, will arrest the attention of cattle breeders and dairymen. Few are aware of the extent of the losses arising from this source. We are informed that several extensive dairymen in the vicinity of Philadelphia lost the greater part of their calves the last year from this cause; and we are promised a paper on this subject for our next No., from a gentleman in a neighboring county, whose experience in the matter will enable him to communicate valuable information to cattle breeders.

We trust that the farmers of Delaware will be awake to the subject of the Canada thistle, which we regret to learn from Dr. T.'s letter, has made its appearance in that region of country. If there is one weed more than another, which may claim pre-eminence as a pest to the farmer, it is the Canada thistle. Much has been said and written on the thistle, and a multitude of remedies recommended, but all may be summed up in a few words. Never allow the plants to breathe—or, in other words, never allow a plant to form leaves. Cut them up at

once, not only once but as often as they appear, and their race will soon be run. We have destroyed many patches of the thistle in this way, and it is the only one in which we have succeeded. They may be checked by mowing, &c., but they are rarely killed. Union of action in any district of country, when the thistle first appears, is all that is necessary to extirpate it; but many of our farmers know to their sorrow, that it is of but little use for them to attempt to keep their farms free, while perhaps their next neighbor does nothing, and not only allows them to spread by their roots, but to ripen their seeds, to float off on every wind, to lodge wherever the ground is broken. On no account should a thistle be allowed to ripen its seed; and they should be cut earlier than they usually are, or there will be juices enough in the stalk to perfect the seeds so far as to give them the power of germination. Whenever a thistle appears in a field, mark the place, and examine it every few days or weeks, to see that no stalks spring up; cut them off as deep as possible below the surface, or dig the ground over, and thus exterminate their root and branch. No half way measures will do any good, and the more widely this is understood and acted upon, the better it will be for the farmer.

WARTS ON COWS' TEATS.

EDITORS OF THE CULTIVATOR—We are much troubled the present season about milking, by nearly all our cows having warts on their teats; some nearly one solid mass, which crack and make them very sore. If you or any of your numerous correspondents can inform us of a cure through the agency of the Cultivator, they will much oblige

Glen Cove, N. Y., June 4, 1843.

Warts are of two kinds; the first only arising in the outer skin or cuticle, and frequently quickly spreading over a large surface; the other penetrating deeper, and fixing themselves more firmly. The first may generally be removed by rubbing the skin with camphorated olive oil; the last are best destroyed by a ligature. The best substance we have tried for this purpose, is India rubber drawn out to a thread, and secured around the base of the wart. In a few days the wart perishes and falls off. Touching the warts with a strong solution of nitrate of silver will also remove them, but it is more apt to leave the surface sore for a time. An English journal states that a strong wash of alum will cure warts of every kind on the bags or teats of cows, but we have not had an opportunity of testing the value of this remedy. If any of our friends are acquainted with a cure for this difficulty, they will oblige us by communicating it for the Cultivator.

LIVE OAK.

Messrs. GAYLORD & TUCKER—I should be gratified if you would inform me through the Cultivator, whether the Live Oak can be grown in Lat. 41° north.

L. DURAND.

The live oak (*Quercus virens*), is strictly a maritime tree, as well as an American one. Commencing near Norfolk, in about lat. 37°, it is found on the coast of the Atlantic around the peninsula of Florida, and along the gulf of Mexico to the Sabine, and in a few instances in the province of Texas. The coast of Florida seems the most congenial to the growth of this valuable tree; and it is hence right to infer that it cannot succeed in a higher latitude than it is now found on our coast. In England, with winters much more mild than ours, in lat. 41°, it has been found impossible to grow it in the open air.

"Messrs. Editors—Pray what do you think of 'Mesmerism?' The sleepers say many strange things. Among others, they assert that the ravages of the wheat weevil may be avoided by sowing a bushel of plaster, mixed with two lbs. of sulphur, on each acre of wheat, when it first comes out of the ground. SKEPTIC."

As to the first part of our correspondent's query, we must say, that as claimed and expounded by some of its professors, and particularly so far as regards clairvoyance, or "second sight," we consider mesmerism one of the greatest humbugs extant. That there is such a thing as magnetism, or what we call such, and animal magnetism, or electro-magnetism, we have no doubt. It can be traced every where; but that it confers the gift of prophecy, we are yet to be convinced. We think, however, the guess as to the effect of sulphur on wheat is a shrewd one, and it is perhaps possible that it may render the plant so offensive to the fly, (for that, we think, is what the writer means,) as to drive it from the field, or prevent its attacks. We hope at least the experiment will be tried, and if successful, let mesmerism receive all due credit.

DAMPNESS OF BRICK BUILDINGS

Messrs. Editors—Several of our citizens have experienced a good deal of inconvenience from dampness on the walls of brick buildings—some to such an extent that the paper has rotted off. Various expedients have been tried, but none except lathing and plastering, (leaving a space between the brick and the plastering,) seems to have fully answered, and that remedy is an inconvenient one. Can you give your readers any information on the subject? How would a coat of cement (water lime) answer? Any information on this subject will be duly appreciated by at least one of your constant readers.

G. M. EICHLBERGER.

We hope this inquiry will arrest the attention of some

of our readers who are qualified to give the information sought, and we shall be happy to give it a place in the Cultivator, as the defect complained of is quite frequent, and is a serious evil. Lathing and plastering brick buildings in such a manner as to leave a space between the plastering and the brick, of what is called dead air, is generally practiced, we believe, where brick buildings are constructed as they should be. Brick walls conduct water from the foundations so freely, that when all external moisture is kept off by painting or otherwise, the walls will be damp, and unfit for residences. Stone houses, built of materials in which aluminous matter or clay is the cementing ingredient of the stone, are subject to the same objection. Houses of limestone are, it is said, free from this dampness; and some have proposed to cut off the ascent of moisture in brick walls, by placing a course or two of limestone on the top of the foundation walls, on which limestone the brick walls of the superstructure are to be reared.

THE LOCUSTS.

THE appearance of the *Cicada septendecim*, or seventeen year Locust, among us, in great numbers, reminds us that the destined period of its duration in its imperfect state has arrived, and that it now issues from the ground, throws off its previous covering, and appears in a new form, to live a new kind of existence, short indeed, but the most important part of the whole; for in the few weeks which they exist in the winged state, the whole business of providing for the succession of the species is perfected, and these animals then perish.

As the name of this insect indicates, it appears among us but once in seventeen years, the whole intermediate time being spent in the grub state, principally beneath the ground. It must be remarked however, that although it is well ascertained that their regular period of arriving at perfection is seventeen years, yet they appear in different places in different years. It is therefore only from the progeny of a single worm that we are to look for their return at stated intervals in the same place. From what is recorded of them, it would seem that they appear in the perfect state almost every year, in some part or other of the United States.

The general opinion that they devour vegetation, is certainly unfounded, for the insect appears to have no such desires. After throwing off its original covering, it crawls upon some shrub, or even upon fences, and remains till capable of flying to a more suitable situation. In some instances they scarcely use their wings at all, but remain on the shrub where they first attach themselves. At this moment, our fields, where the shrub oaks and thorn bushes grow, literally swarm with them.

The mode in which these insects injure vegetation, is by puncturing the small branches for the purpose of depositing their eggs, of which every female deposits from four to five hundred. The oak is usually preferred by the insects for making the nests for her eggs; but they often attach themselves to other trees, and orchards frequently suffer severely. About the time the eggs are hatched, the branches begin to decay, and from the effect of winds or their own weight, fall to the ground, or remain hanging by the bark.

We would say to our readers, that the habits of these insects are worth observing, and it is an opportunity which will not soon again occur; go therefore and see in what manner nature has provided for the succession of this race. Be satisfied also, that they are not the devouring creatures which the name suggests, but that the injury they perpetrate is only done while preparing for the protection of their eggs, and providing for a succession of the species.

"THE GREAT AGRICULTURAL ERA COMING."

UNDER this head, the *Long Island Star*, after alluding to the labors of Liebig, Johnston and others, in connection with the application of the principles of chemistry to agriculture, says:

"A greater advance than heretofore, has, we understand, been lately made. Dr. Wm. Valentine, heretofore better known in other departments than that of a chemist, in which he has been well educated, and for which he has a natural aptitude, has been lately devoting his whole attention to Agricultural Chemistry. By means of powerful apparatus, he has been analyzing soils with a view to applying the best means of fertilizing them, and has been learning the means of compounding by means of chemical agents, the best manures. He believes, (and other scientific men believe so likewise,) that he has acquired the art of enabling farmers to manure their land at one-tenth the ordinary expense of money and labor. His discovery has been patented, and he has recently been employed in laying out on the farms of Wm. M. Weeks and others, at Glen Cove, and is calculating to extend his operations widely."

Since the above was in type, we have had an opportunity of conversing with Dr. VALENTINE, on the subject of his researches in agricultural chemistry. He explained to us the substances used, and the manner of making his artificial manure. That it will prove a powerful fertilizer, we do not doubt, and are glad to learn that its merits are being put to a practical test by several farmers on Long Island, the result of which will in due time be made public.

We have received a note from Dr. Valentine, setting forth the advantages to be derived from his discoveries which shall have a place next month.

LEGISLATIVE AID TO AGRICULTURE.

THE subject of legislative aid to agriculture is one of so much importance, that we feel ourselves justified in occasionally referring to it. It is one which should certainly be kept before the farmers of the state, now that the experiment made is in such successful progress, as the friends of agriculture should be anxious to ascertain fully the operation of the present law, that they may act understandingly when the question for its renewal or discontinuance shall come before them. That the legislature will be governed by the will of the people, and that their opinion of the matter should be fully expressed, no one can reasonably doubt. That the present enactment in favor of agriculture has operated most beneficially, we have as yet heard no one dispute. The prejudices of many against the measure; prejudices honestly indulged, and originating in former errors connected with similar aid granted, though on conditions entirely different, have been done away; and perhaps no legislative act of the last five years, can be named about which there is so little diversity of opinion among all classes, as respecting the one by which a pittance of the state's revenue is devoted to the encouragement of agriculture.

There can be no question that the true cause of the efficiency of the present law in favor of aiding agriculture, is to be found in that provision which renders it necessary that the farmer should help himself, before he was entitled to expect help from the state. Experience in all matters of a similar nature, has demonstrated that there is no way in which the interest of individuals can be so soon secured, as by connecting the prosecution of the object with personal contribution. By rendering it necessary that County societies should be organized, and should raise an amount equal to that to which they were entitled from the state, the subject was brought home to the agriculturist, and the benefit he was to receive, made dependent on his own exertions.

There has been a strange opinion prevalent on this subject of aid to agriculture, which was that while all other classes were receiving more or less aid or protection from government, the agricultural part alone were to be left to their own resources. The merchants sail his ships and carries on his trade under the fostering protection of the nation; the manufacturer keeps his hammers and spindles active through the same influence; but it is expected that the farmer, he who furnishes freight for the one, and sustenance for all, shall go on with no encouragement from the public, while he bears the burden of taxation, and keeps the wheels of that government by which he is neglected, moving. This state has appropriated forty thousand dollars, or eight thousand dollars per year for five years, for the benefit of agriculture; and what is the result? We see associations springing up in every county to avail themselves of the grant. Public opinion is directed to the importance of agriculture, and a spirit of emulation and improvement is excited. Cattle Shows and Fairs exhibit to farmers the vast difference between good and bad implements, superior and inferior stock, and by bringing farmers in contact with each other, do away those feelings of distrust and distance, which are too often operative where seclusion and confinement to the farm prevail.

There is another reason why the state should lend its aid to agriculture, which is yearly becoming more efficient, and more deserving of attention. Scientific and practical improvements in agriculture, are not a less decided common public benefit, than in any other department of life; and while no one grudges the sums expended for the purposes of education, as such, by the state, the farmer can fairly demand the extension of those benefits conferred at the present time by the application of science to agriculture, through the influence of societies formed and fostered by the aid of the state. The sum demanded is so trifling, compared with the object in view, that it is surprising the granting the required aid should have encountered so much opposition; and it can only be accounted for by supposing that the objections had reference rather to the manner in which aid was to be given, than to the granting of the aid in itself.

The money drawn from the treasury to aid the cause of education, has for its object the elevation of the masses by the extension of knowledge, or the means of acquiring it, to all; it is to teach them their rights and their duties, and the best means of fulfilling them; to erect and point out to them a higher standard of moral and intellectual power than the one their fathers were accustomed to contemplate. It is to aid in the extension of knowledge most essential to all, that the farmer claims the aid of legislation. That alone seems adequate to spread the rich results which the labors of science, and the experiments the principles developed have produced, before those who are the most interested in them. No matter what the subject may be, if it is one of common benefit, commerce, manufactures, education, agriculture, all have a right in proportion to their importance, and without infringing on the rights of others, to look to legislation for aid. If there is a pursuit more ancient, more honorable, or more deserving of public aid than agriculture, it is still to be pointed out; if there is one in which the same sum will produce greater or more beneficial results, it is still to be shown.

We trust that in the examination of this subject, no person, certainly no farmer, will allow any considerations except such as spring from a regard to the public welfare, to have for a moment a place in his bosom. All party feelings, all narrow and contracted views, all sectional or personal jealousies, should be eschewed at once and forever. It is a subject in which all are interested,

for the cultivation of the soil and its products, constitute the base of prosperity to all classes. Let the operation of the present law, in all its bearings and its consequences, be well and carefully weighed; and when the time arrives for its re-enactment, with such alterations as experience may suggest, we cannot believe that any enlightened legislator will be found among its opponents.

NEW NOTIONS.

UNDER the head of "Cultivating ground without manure," or "Wonders will never cease," an article, copied from the London Gard. Chronicle, has been going the round of most of our journals. It professes to give the results obtained by a Mr. Bieck of Germany, by which he has the art of growing the most luxuriant crop on the poorest lands, and at an expense so trifling, that for wheat or corn per acre, it will not exceed ten cents, and for rape, turneps, cabbage, &c. not over five cents per acre. Now in these days, we do not like to pronounce any thing impossible, unless it is to make an honest man out of a rogue; but the truth is, that notwithstanding all the certificates with which the story is fortified, we do not believe it, and for that reason have not before alluded to it. The preparation used for the seed is kept a great secret; but the fact that there is some preparation used, is demonstration that so far as any effect is produced, it is the consequence of manure. We are willing to admit that a large proportion of many plants is derived from the atmosphere; but this power of absorption or combination is derived from the soil originally, and that power is conferred and perpetuated by manures. That manures too may be used in a highly concentrated form, we have the most abundant evidence; but to assert that ten cents worth of even the most powerful can produce the effect described by Mr. Bieck, sounds to us most marvelously like the Multicaulis and Chinese Tree Corn stories. Lord Kaimes once told his man John, "that the time would come when a farmer would carry the manure for a field in his pocket." John shook his head. "Ah, I see you doubt my assertion," said his lordship. "Far be it from me to doubt any assertion your lordship may please to make," answered John: "I was only thinking that if the manure was carried out in one pocket, the crop could be brought home in the other." We are strenuous advocates of all real improvements, and such are always rational; but we do not advise our farmers to think of growing crops on flat bare rocks, or attempt the production of them on poor soils without manure. On the contrary we advise them to save and apply all the manure possible, a course at once agreeing with the laws of nature and the dictates of common sense.

CONVERTING PEAT SOIL INTO MEADOW.

For centuries since the settlement of New England, thousands, we may say hundreds of thousands of acres of bog, swamp, or peat lands, have been unreclaimed, receiving annual depositions of fertile matter from the neighboring hills or streams, yet returning nothing to the owner, and considered the most worthless part of the farm. Attempts were indeed made at times to subject some of these places to cultivation, but nine times out of ten the effort was a complete failure, and the ground was finally surrendered to the dominion of the coarse water bog grasses and the bushes that usually accompany them. More or less such lands are found along the whole sea board of the northern and middle States, and have been, as a matter of course, until within a few years, consigned to barrenness so far as any valuable product is concerned.

At last, science came to the aid of the farmer, and taught him the composition of soils and the best method of remedying their existing defects. It taught him that those spots which had so long been eye sores to every lover of agriculture, could be converted into the most fertile parts of the farm; that when relieved from the souring effects of stagnant water, and prepared by the mixture of other and firmer earths, a new and valuable vegetation would succeed to one that was worthless, and thus the productive capabilities of the country be vastly increased. This process is now yearly going into effect; and the heaviest crops of fine English grasses, roots and grain are now grown on lands that from time immemorial have been quaking bogs, or dangerous quagmires. We have rarely met with a better illustration of these facts, than in the report made by Col. A. MOORE, of Concord, Mass., to the Massachusetts Society for the Promotion of Agriculture, and who received the premium offered on farms in that State.

The first object of Col. Moore, on taking possession of his unpromising farm in 1835, was to drain his peat and bog meadows, and this he accomplished; but he found the ground did not become solid, that there was a tendency to allow the return of coarse grasses, and that attempts to burn the surface, though partially successful, endangered the destruction of the whole peat meadow. In this dilemma he commenced drawing on sandy loam from the sand hills that bordered the swampy lands. "This answered the purpose. The ground became firm, the grass seeds took, and the yield was altogether beyond my expectations." The process pursued by the Colonel is as follows. The land is first ditched and drained; the bushes cut off, or if large, pulled up; the soil well levelled, and about 400 cart loads of sandy loam spread upon an acre; 20 cart loads of compost manure are added, and thoroughly mixed by harrowing. On this, in the month of September, half a bushel of herds-

grass, and half a bushel of red-top grass seeds are sown, harrowed again, and the whole rolled smooth with a heavy roller. The Colonel says:—"I have now from 20 to 25 acres which have thus been reclaimed. The success I have had may be judged of by the value of the crops produced. Every year since this land has been reclaimed, whether wet or dry, it has produced on an average not less than three tons of English hay to an acre, which brings the highest price in market. In 1838, at the request of Mr. Colman, the Agricultural Commissioner, I weighed the first crop of hay on one acre of this land, and it weighed 7,610 lbs. About three acres of it during the present season, I have no doubt, produced five tons to the acre. It was mowed twice, and the second crop was so large that it was considerably lodged. One other fact may be stated. A few years ago I built a barn 30 feet by 40, and some of my neighbors laughed at me for it, and said, 'it is a good barn, but what are you going to fill it with?' That barn, together with one I have since built, 40 by 80 feet, as well as my others are now full, and I shall have to build more or stop reclaiming meadows." "I verily believe that the two first crops, have, in every instance, repaid the whole cost and expense of reclaiming."

Such are the results obtained by a skillful application of labor, and following out the system of mixing soils as pointed out by nature, and so clearly indispensable to productiveness. What has been done by Col. Moore may be done by others, and the annual produce and profits of similarly constituted farms be thus very greatly increased.

COST OF FENCING.

THE Peoria Press contains a paper on fences by a Peoria farmer, which, although more particularly applicable to western farming, contains some hints which we deem worthy of abridgment for the Cultivator. His remarks relate to sod fences, hedge fences, picket fences, and rail fences. To the first he objects for the following reasons:—1st. Cattle and the frost will throw them down—2d. They would be no defence against hogs and sheep if they stood—3d. Grass will not form a sward on an inclination so steep that cattle cannot walk up it; and 4th. They are immovable. He advises farmers, if they wish to lose their labor and their crops, to trust to a sod fence, and they will effectually do it. In his estimation they are not worth a groat. His objections to a hedge fence, are—1st. They are a stationary fence, and not suitable where the boundaries of farms change as frequently as in this country—2d. A prairie fire would totally destroy them—3d. The expenses of trimming and keeping in repair would quadruple that of a rail fence; and 4th. It would cost as much to make a fence to protect the hedge, as to protect the crop. Picket and rail fences are the ones now in most common use in that section of the country, and he estimates the expense of each as follows, which we think a pretty fair allowance:

"Cost of picket fencing for 80 rods in length, calculating you can get timber within six miles, so as to make two loads per day.

133 posts, 10 feet apart, at \$1 50,.....	\$2 00
264 flat rails, at \$2 per hundred,.....	5 28
3,300 pickets, at \$4 per thousand,.....	13 20
100 pounds nails,.....	8 00
Hauling 8 loads of rails, 4 of posts, 7 of pickets, at \$1,.....	19 00
Sharpening pickets, dressing rails and putting up fence,.....	30 00
	\$77 48

Cost of 80 rods rail fencing.

1,000 rails and stakes,.....	16 00
Hauling 48 loads, 33 to the load,.....	48 00
Staking and putting up at 31 cents per hundred,.....	5 00
	69 00

The Peoria farmer maintains that rail fence is the cheapest and best of any of the fences, as it costs the least in the first place; is most easily repaired or removed; is not liable to be blown down, or thrown out by frost; and should it be so, is easily put up again. Where there is a scarcity of timber (and that is the great difficulty in fencing at the west,) he proposes the cultivation of the locust. The following are his directions on this point:

"Plow and prepare your land as for corn; draw furrows each way three feet apart, quite shallow; then drop in the hill two or three black locust seed, having previously well scalded them, and cover with the hoe about an inch deep, pressing the dirt on the seeds; keep the weeds out the two first years, then let them grow, and in five or six years you may have as many rails made in such a piece of timber as you may choose. There is no trick or mystery about the matter, they can be as easily grown as corn. The late Jesse Bowles, of Adams county, grew one of the finest locust groves in the State, which would at five years growth have cut two rails lengths to each tree. If you are afraid the roots of the grove would spread, dig a ditch round it and the locust roots will not cross."

An acre planted in this way would produce 4,840 trees, but we presume that in actual planting, it would be found better to place the trees at a greater distance. They would not only grow better, but the timber would be sounder, and more durable. Locust is a tree, we are well aware, of most vigorous growth in favorable locations; but we think that an average of ten years would be a time sufficiently limited for the growth of two good rails on one tree, and that if they can be produced in sufficient numbers in that time, the prairie farmers will find them cheaper than any other.

Cattle should have access to salt at all times.

DICTIONARY OF TERMS USED IN
Agriculture and its kindred Sciences.

MAGNESIA.—This is one of the earths having a metallic base called *magnesium*. Magnesia is usually procured for the purposes of commerce from the magnesian limestone, acted upon with the impure muriate of magnesia or the bittern of sea salt manufactories. Except in combination with limestone, it is of little use as an earth; but in some limestones of this country it constitutes 40 per cent of the whole, and consequently, where such stones are burned for agricultural purposes, it must exercise a decided influence for good or evil. The result of many experiments in England and in this country, would seem to prove that magnesia is injurious to vegetation, and that the magnesian limestones are to be rejected. At the same time it must be remarked, that the principal limestone used by the farmers of Pennsylvania and Delaware, are more strongly magnesian than any other known limestones in the United States, and no complaints have been made as to the effect. Epsom salts are the sulphate of magnesia, and are made by neutralizing diluted sulphuric acid with carbonate of magnesia. Baltimore is the great manufactory of this substance in the U. States. The magnesia is procured from the magnesian limestones of Pennsylvania, and from one and a half to two millions of lbs. of salts are made annually.

MAIZE.—A plant of the sugar cane family, yielding one of the most valuable articles for animal or human food known, and under the name of Indian corn, more extensively grown in the United States, than any other plant used for bread. It is a native of America, and was unknown in Europe until this continent was discovered. It has now gone the circuit of the globe, and wherever the climate has been found suitable to its growth (and its range is very broad,) it has taken deep hold as one of the most useful of plants. There are more than 40 varieties known, most of which are the result of fertilizing crosses, not more than two or three kinds being known at the settlement of the U. States. A new variety has within a few years been discovered in Texas, each kernel enveloped in a husk, and has been grown in the United States in a few instances. Maize is a plant that will endure a greater degree of heat than any other of our common cultivated plants, and without such heat for some months, will not succeed. The hot dry summers of the United States are found admirably adapted to this grain, over its whole extent, and the amount annually produced is immense. A warm, deep, rich soil is required for maize, and the crop varies much according to the soil, mode of planting, and after cultivation. One hundred bushels per acre, for several years, has not been an uncommon crop; and from 150 to 175 bushels per acre, have been reached. Maize is unequalled for the making of first rate pork; and when ground with the cob and fed to horses, is better than any other grain, oats perhaps excepted. If fed without the cob, it should be mixed with cut straw or hay, as alone the degree of nutriment is disproportioned to the bulk required to properly distend the stomach of the animal.

MANGE.—This is an eruption of the skin, attended with scurfiness, pimples, the exudation of a watery matter, and if not checked, the formation of extensive scabs. The itching is usually excessive, and the animal rubs the hair and tears the skin in its vain efforts at relief. It is one of the most serious diseases that attacks animals, and one of the most contagious. If it enters a stable, unless extraordinary precautions are used, the whole will be affected, for the slightest contact is sufficient to communicate the infection. The horse, ox, and dog, are all subject to the mange; but the disease in each, differs from the disease in the others, and cannot be communicated from one to the other. Thus the mange of the horse is never given to the dog, or that of the ox or cow to the horse. In this respect, the mange follows the same law as the itch in the human race, which it in fact much resembles, as the itch cannot be communicated to the animal, or the mange of the brute to man. Further, the same medicines that will cure this disease in man, will cure the mange in animals, and the same course of treatment that will be efficacious in one case, will succeed in the other. The remedy is easy and simple. One ounce of the flour of sulphur, one ounce of train oil, well ground together, and half an ounce common turpentine, may be used. The places affected by mange should be well brushed to clean off the loose scurf, then well washed with soap and water, and after being fully dried, the ointment should be thoroughly rubbed in with the hand or a soft piece of flannel. Corrosive sublimate, hellebore, and tobacco, are sometimes used, but great caution is required with such solutions or decoctions, and fatal results not unfrequently ensue when they are unskillfully used. We think with Mr. Youatt, that sulphur in some form is indispensable in every case of mange, and that in this and similar eruptive diseases, it is the sheet anchor of the veterinary surgeon. Some internal medicines may be given at the same time, such as flour of sulphur, or in the case of the horse, a mercurial ball. The mange most commonly originates from some half fed, half stabled animal, and then spreads to those with which it comes in contact. Animals that are kept clean, well fed, and stabled, rarely suffer from mange, unless exposed to contamination by the presence of diseased ones.

MANURES.—Whatever promotes the growth of plants, and thus increases the reward of agricultural labor, whether existing in the earth or air, is a manure; though the term is usually given to such substances as are applied to cultivated crops, or to the soils in which they are grown,

That the growth of plants exhausts the soil is evident, and unless the matter which goes to their formation is returned to it in some form, barrenness is the inevitable result. Manuring effects this. It was formerly supposed that decomposed vegetables or animal matters, combined with certain earthy substances or salts, formed compounds soluble in water, which were taken up by the roots of plants and incorporated into their structure. It is now, however, generally supposed that the decomposed substances or manures do nothing more than furnish the requisite supply of carbonic gas, which is absorbed from the air and elaborated by the leaves, or absorbed by water and taken up by the roots, to undergo the same process of conversion into vegetable tissue. So far as the farmer is concerned, it matters but little which of these two theories is the correct one, or whether, (as we are inclined to believe,) they are both partly true, since the value and the necessity of the application of manures remains the same. There are in most plants, particularly the cultivated ones, certain peculiar principles, without a supply of which, in some form, they cannot arrive at perfection. The plant may be made to grow vigorously, but the seed, or that part which gives it its value, will not be formed or matured unless its distinctive principles are present. Thus gluten is a distinctive principle in wheat; and though a heavy growth of straw may be produced, unless the nitrogen or the ammonia necessary to its formation be furnished, the berry will be wanting. An excess of manures will destroy plants as effectually as the want of them, although where plants grow in a natural state, such a condition is not frequent, as the mixture of the manures with the earths, while they lessen the immediate effects, prolong their efficacy. As a general rule it will be found best to apply manures on or near the surface. It is the way nature adopts, and the carbon liberated is directly available by the roots or leaves. As the circulation of air is necessary to the continued formation of carbonic gas, a shallow covering will subserve every purpose better than a deep one. Indeed, it may be doubted, whether in every case of the application of manures, a surface use is not to be preferred, unless the manures are in a fresh state, or evolving ammoniacal or other gases, which require a slight covering of the earth to prevent their dispersion and comparative loss in the air. Messrs. Bouscington and Payen, have lately given to the public the results of an elaborate series of experiments to ascertain the relative value of manures, derived from the knowledge of the ammonia they respectively furnish; that substance, or rather nitrogen, being by these chemists, deemed the element of the greatest importance in manure. From their work, as copied in the Gardener's Chronicle, we extract a few of the items given. It will be seen that their estimate agrees very well with that which the practical farmer had allowed some of the same substances. The highest or most valuable in the list, are placed first. Feathers, hair, woolen rags, horn rasps, and dried insoluble blood, rank alike. Earth from graves, soluble blood, and dry muscular flesh, next. Pigeon dung. Salted fish and boiled bones. Bones with their fat. Moist bones. Oil cake. Poudrette. Blood. Glue refuse. Horse urine. Goat dung. Sheep dung. Pig dung. Horse dung. Sea-weed. Clover roots. Heads of wheat. Wheat chaff. Cow urine. Cow dung. Some manures it is evident, act mechanically as well as otherwise; that is, their application partially changes the character of the soil, rendering it more suitable for the production of plants than before. In heavy clay soils, lime or sandy marl has this effect; and straw or other long manures plowed under, prevent that denseness frequently fatal to cultivation. Manures and their application, is perhaps the most important topic presented to the consideration of the farmer in cultivating the soil; and if he keeps steadily in view the necessity of returning to the soil as much or more than he takes from it, he cannot greatly err in its management.

MAPLE.—This is the name of an American tree, of which there are several species and varieties, the most important and valuable of which is the sugar maple, (*Acer saccharinum*.) This tree is found abundantly in the northern part of the U. States and in Canada, and large quantities of the best sugar is annually made from it. Sugar making constitutes a regular part of the farm work on those farms where the tree is found, and from 500 to 1,000 lbs. may be considered the average annual product of a common sugar works. Fortunately the labor required, falls at a time when other farming operations cannot well be carried on, being the latter part of March, and first of April, and the time that the sap flows varying from two weeks to a month, depending on the state of the weather. The finest sugar is made from the sap that flows the earliest; and care should always be taken that the sap is always boiled down before the process of fermentation or souring commences. If this cannot be done, from the quantity on hand, fresh slaked lime should be thrown into the vessels containing it, which will neutralize all the acids formed, and secure the formation of sugar. In the latter part of the sugar season, after the buds begin to swell, the conversion of sap into sugar becomes more difficult, and that made is not as fine flavored as that earlier produced. The sap flows from the alburnum or sap wood, and this should not be wounded to the depth of more than an inch or an inch and a half. The practice of "boxing" the trees, or using an axe to procure the sap is a bad one, and will not be practiced by any farmer who expects to use his sugar works in coming years. From four to six lbs. of sugar are produced in favorable seasons from each tree; and one man, and a boy will tend from 100 to 150 trees. Some of the other varieties of the maple produce those beautiful woods

called curled and birdseye maple, and which are in such demand by cabinet makers.

MARE.—Some difference of opinion exists among farmers as to the respective value of mares or geldings for labor; but we think when every thing is taken into consideration, the farmer will deem the mare the most profitable. Mares are as lasting and durable as geldings; do not usually cost as much; and should any accident render them permanently lame, or unfit for labor, or even if remaining sound, they may be used for breeding. There is no necessity for the mare lying idle while with foal. Moderate labor, even to the period of foaling, will be better for her and for the foal, as she will be in more vigorous health than if idle. It is a singular fact that the Arabs, noted for the beauty and value of their horses, use none but mares. These they find more hardy, capable of longer endurance over the deserts than geldings, and prize and retain them accordingly. Mr. Youatt lays down as a rule, and it is one which we are confident every breeder of horses who understands his business will concede is correct, "that the value of the foal depends a great deal more on the dam than on the sire." Farmers, however, too often forget this fact, and in raising horses go on the supposition that every mare is a mare, and every colt a colt, whether they are worth raising or not. A little attention to this point would benefit the breeder by adding to his profits, and greatly improve the appearance and actual value of our farm horses.

MARL.—Various earthy deposits are known under the name of marl, but that which is the most common, and as a whole, of the most use to the farmer, is that known as calcareous marl, from its containing more or less carbonate of lime. Marl is usually composed of clay, sand and lime; and the proportions of the former, cause it to be called sandy or clayey marl. Nearly all marls abound in animal exuvia, such as shell fish, &c., and to these their efficacy as a manure may in many instances be attributed. But the most important marls of the United States, those of the green sand formation, and which experience has proved of such immense value on the sandy soils of New-Jersey and the region south, it is supposed from the analysis of Prof. Rogers and others, owe their efficacy to the potash or alkali they contain, which in some instances has reached 10 per cent. The clay banks in the vicinity of Albany, which spread over the sandy plains overlying them, or in their vicinity, produce such excellent effects, according to Judge Buel, contain from 25 to 30 per cent of lime, and therefore approach the nature of marl. The central parts of Onondaga and Cayuga counties, contain immense deposits of calcareous marl, nearly pure, and which we doubt not will hereafter be extensively used. At present such is the abundance of sulphate and carbonate of lime, not only in the immediate vicinity, but in the soils of those counties, that the necessity for such application has not become apparent. Marl, when dug from the pits, should lie some little time on the surface, to undergo aeration, and such changes as the atmosphere produces on soils, before it is used as a manure. The winter is the best time for this, as freezing pulverizes the clay parts more effectually than any other process can do. It may be applied to meadows, pasture lands or corn, and will be found useful in all cases, where lime is wanting, or mechanical alterations in the soil are required.

MEADOW.—The meadow is that part of the farm from which in temperate or northern latitudes, hay is made for the wintering of domestic stock. Under the old system of farming, the meadow was never disturbed by the plow, but for years was reserved for the scythe; consequently when it was possible, the meadow was found on low lands, or those naturally wet, and to preserve its fertility, much of the manure of the farm was applied in surface dressings, to the great detriment of the tillage land and the crops. Under the improved or rotative system of husbandry, every part of the farm is alike subjected to the plow and the scythe, and the meadow changes as often as the wheat or the corn field. To do this, every part of the farm is first made capable of growing any of the commonly cultivated crops, by draining, and while the average product of the whole farm is greatly increased, the quantity and quality of the hay made, will be proportionally improved. The grasses best adapted for meadows where a rotation is practiced, are the clovers, timothy, orchard grass, herds grass, and perhaps some of the foreign grasses may be found useful; but at present nothing known is equal to clover and timothy. In seeding down lands, too little seed is generally used, whether the land is to be meadow or pasture. Heavy seeding makes a closer turf, finer hay, sweeter and better pasture, and by giving more roots restores the exhaustion consequent on cropping, much sooner. In seeding lands they should always be thoroughly rolled. It will assist the covering and germination of the seeds, and render it level and smooth for the scythe. Lands intended for mowing, should not be trodden or poached by the feet of cattle in the spring, as such poaching renders the surface uneven, destroys the roots of plants, and is of little service to animals. Where, however, it is inconvenient to subject meadow land to the plow, and the grasses and the product decline, such meadows may be restored by occasionally giving them a liberal dressing of compost manure, sowing them afresh with a portion of the most valuable grasses, and giving them a very heavy harrowing in all directions. This will dislodge the mosses that clog the surface in old meadows, loosen the surface and promote atmospheric action, and give a new and more vigorous growth of grass plants.

Good housekeeping is always very essential.

Original Papers from Contributors.

LETTER FROM OHIO.

Messrs. GAYLORD & TUCKER—In a late tour through the county of Licking, in this state, I noted the following observations, which may, perhaps, be worth perusal:

CORNSTALK SUGAR.—In the Yankee settlement of Granville, I found that several experiments were made in the manufacture of this article last year, with various success. I was shown a sample of sugar made by Mr. Aylesworth, which was well grained and well flavored, and only needed a better draining to make it an excellent article. Some little difficulty was experienced in getting the syrup to crystallize, owing, as is now believed, to the stalks having become too old before they were cut. Mr. Fassett, who was one of those engaged in the experiments, thinks the proper time for cutting is when the blossoms have all fallen from the tassels, or when the top of the tassel is beginning to die. The saccharine of the stalk is supposed to be then most abundant and in the best state. No difficulty was experienced in making first rate molasses, and samples were shown me equal, if not superior, to any cane molasses I ever saw. It would be an object to make cornstalk molasses, even if no sugar were made—it is such a nice article, and can be made so very easily. But the experiments of last year have sufficiently demonstrated the practicability of making sugar, and no doubt is entertained that practice and observation will furnish all the additional knowledge which is requisite for the perfection of the manufacture. The yield is very satisfactory. I understood Mr. Fassett to say, that in their most successful experiments it was equal to 700 pounds per acre, and he thinks that even 800 or 900 pounds may be obtained.

LIVE STOCK.—Granville has been noted for good swine for a long time. Gen. A. Munson has an imported Berkshire boar, one of the best hogs I ever saw, that has done an incalculable good in this region. Mr. Fassett has excellent hogs. He is a veteran breeder and feeder, and it is said has not had an ordinary pig for 20 years. He has a large well shaped old sow, that he calls Bedford and Berkshire, that breeds the greatest pigs by Gen. Munson's boar, to be found in "all these diggins." In 1840, Mr. Fassett killed four of her pigs at the age of 10 months and 6 days, whose average dressed weight was 334 pounds—the largest weighing 350 pounds! In 1841, he killed but one or two of her pigs, they being mostly sold for breeders; but one was killed at 9 months old, that weighed upwards of 300 pounds. Last year, (1842,) he killed five of her pigs at 8 months and 15 days old, whose average dressed weight was 295½ pounds—the largest weighing 320 pounds! Now here is proof by the steel yards. Mr. F. is a matter of fact man, and does not come to his conclusions by guessing. I do not remember having ever known so many pigs from one sow, giving such remarkable weights.

Mr. Brice, near Newark, has a Durham bull, Hampton, purchased of Mr. Van Rensselaer of your city, in 1841. He is a prime bull, and his progeny show that he will be a great improvement to the cattle of this vicinity. Mr. Brice has also a young Durham cow, (Mary,) which he bought of Messrs. Corning & Sotham, in 1841. She has likewise become a splendid animal, and though she has not had a calf since Mr. B. bought her, it is hoped she is now in a way to have one. Mr. B. has a Cotswold buck that he bought of Messrs. Corning & Sotham. I think he is the same whose likeness was once given in the Cultivator, and which a correspondent of the Farmer's Cabinet attempted to "poke fun" at, for having, as he said, in the likeness represented a "natural piazza behind." But whatever may have been the beauties or blemishes of the likeness, or the opinions of captious critics concerning it, the sheep is a noble one, and sheared 12½ pounds washed wool last year! Mr. B. has been unfortunate with the South Downs which he had of Mr. Prentice. He has lost all his ewes from one accident and another, and has only the buck left. He is a very snug, good bodied animal, with excellent wool.

Gen. Thomas W. Wilson, near Newark, has two cows and a bull of the stock of Mr. Thomas Bates of Kirk-Leavington, England. The old cow, mother of the other, was presented by Mr. Bates, to the lady of Bishop McIlvaine of Kenyon college, in this state. It is good stock. They are light boned, thrifty, and good handlers. The young cow looks like a very good milker. The two cows have fine heifer calves, by Mr. Brice's bull.

SILK.—Hon. Elias Howell has a large cocoonery, and has done considerable in the silk line. He said they did not do much last year, but sold about \$100 dollars worth of cocoons. He is intending to do much more this year. He can feed from five hundred to seven hundred thousand at a time. Mrs. Howell, under whose superintendence the cocoonery is managed, prefers the sulphur variety of worms, as being more healthy and requiring less care.

The silk business will undoubtedly become important in this part of the country. Some establishments which have been erected for the manufacture of silk, have done well. Mr. Gill of Mt. Pleasant, sold upwards of \$9,000 worth of silk goods of his own manufacture, last year. He is enlarging his operations, and intends to increase his business considerably this season. His fabrics are good—some of them pronounced by competent judges equal to any imported—and are afforded at as low prices, according to the weight.

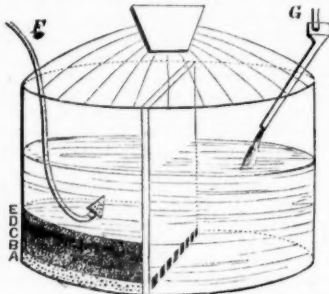
The kind of mulberry generally used, is the Multicaulis—there are some Italian. Of these, my better half, who has fed silk worms for several years, prefers the Italian. It is much hardier, puts out much earlier in the spring, produces more wholesome foliage, and from the abundance of lateral roots which can be obtained by heading down, it is more convenient for feeding. The Multicaulis is good for late feeding, but unless it is taken up in the fall, it will almost always die down to the ground in winter, and frequently die entirely. I should like to know if there is not some kind that will do better. How do the large leaf Canton and the Alpine, continue to do at the North? It is sometime since I have seen them, but my impression is, from what I have seen, that they would be valuable here. I wish some of your correspondents would let us know how these kinds succeed as to hardiness, quality and quantity of foliage, &c., and where they can be had.

PIGEON ROOSTS.—One of these curiosities is now to be seen in the vicinity of Granville. It covers (as I was informed,) an extent of some square miles, and is occupied by millions of pigeons. They congregate in such immense masses as to spoil the heaviest timber, breaking down the largest limbs. They feed on the beech nuts, and are very fat. Some people go to the roost and kill them for mere wanton sport. They stick one end of a long limber pole in the ground, and as the pigeons come into the roost, they swing it swiftly backwards and forwards, cutting down hundreds. They fly to the roosts in the latter part of the day in clouds, darkening the air, and stunning the ears with the sound of their wings. At such times, the slaughtering of numbers has no effect on the others; the hindmost rush on the others like Buffaloes running over a precipice. The nests are rudely made of a few sticks; sometimes there are twenty on a tree, and the trees as thick as they can stand. The squabs are said to be heavier about the time they are able to fly than they ever are afterwards, and are then considered most delicate eating. The inhabitants contemplate making a general feast of them about the time they come out of their nests. Where such myriads of them congregate, the ground receives a coating of manure which makes it very rich. Yours, &c.

Zanesville, O., May 28, 1843. S. HOWARD.

FILTERING CISTERN.

Messrs. GAYLORD & TUCKER—About 2 years since, I was induced for various reasons to construct a cistern for filtering rain water, that it might be used for drinking and other household purposes. I had never seen one, and at the moment was unable to get any requisite information as to the proper mode of construction, and was thus forced to rely upon my own ingenuity. A trial for two years has convinced me that I was correct in my notions, and I would not now exchange my cistern for the most wells I know of, even for drinking. I submit my plan, hoping that it may be beneficial to some one at least of your numerous readers.



Filtering Cistern.—(Fig. 51.)

- | | |
|-------------------------------|------------------------|
| A. Gravel. | D. Charcoal. |
| B. Coarse sand. | E. Coarse sand. |
| C. Fine sand. | G. Leader and strainer |
| F. Lead pipe leading to pump. | |

The cistern is built of brick, (8 inch walls,) holding 30 hds.; it is of an oval shape, and about 7 feet deep. Across the center I built a partition wall, also of brick, 8 inches thick, leaving 8 apertures at the bottom, each 2½ by 3 inches; over which holes I put a zinc plate perforated with holes, acting as strainers. On the south side of this partition wall, I put in my filtering material as follows:—1st, a layer of strata or coarse gravel, say from the size of peas to that of hazelnuts, about 6 inches thick; then a strata of clean gravel or very coarse sand, about 4 inches thick; then a strata of fine beach sand 4 inches thick; then a strata of charcoal 3 inches thick, and covered it with another strata of gravel or coarse sand. The water from the roof passes into the north side, and finding its way through the apertures, forces upwards through these different materials to find its own level, and from this south part I take it by means of a lead pipe and pump. I should add that before the water enters the cistern at all, it passes through a copper box above ground, where it is strained through a wire sieve, and thus bugs and all insects of any size, are prevented from getting into the cistern altogether.

Newburgh, May 18, 1843.

T. M. NIVEN.

CORNSTALK CUTTERS.

Messrs. GAYLORD & TUCKER—In some agricultural publication of the last year, I saw a description of a corn

stalk cutter; there is another of different form in the last No. of the Cultivator, p. 35; permit me to describe another, which I think preferable, because cheaper, and in possession of every farmer. Take an old worn out scythe, cut it in two about four inches nearer the heel than point, then make the heel into a shank, upon which every boy can put a wooden handle. Take the other part of the scythe, and with a cold chisel separate the thin part from the back for about four inches, and cut it off, then get that part of the back from which you have taken the edge, hammered into a shank; and when handled, you have two of the most convenient and efficient corn cutters ever used.

I have often wondered why this simple instrument has not been described in some agricultural paper, (perhaps it has, though I have not seen it;) and I have sometimes thought that it was too simple an affair for a formal notice in a paper, and if you think so, act accordingly, but if you think it worthy of an insertion in the Cultivator, it is at your service and may benefit some one.

Yours respectfully,

L. A. MOODY.

Willoughby, Lake co., O., May 20, 1843.

IMPROVED PICKET FENCE.

Messrs. GAYLORD & TUCKER—I am constructing a picket fence this year, on a somewhat new plan; and as I have never seen or heard of any just like it, I will forward you a brief description of it. It differs from the common fence only in the position of the rails, which are sawed three inches square and sixteen feet in length, supported by their posts, and the lower rail halved into the post, and the upper one halved on the top, so that the pickets, instead of being nailed on the flat side of the rail, are nailed on to the quadrilateral corner, and of course one corner of the rail points directly towards the zenith, and the opposite corner towards the nadir. The posts should be cased, in order to preserve the ends of the rails from decaying.

Fence constructed in this way, is more durable than that built in any other way; and the reasons for the fact are obvious. And first, when pickets are nailed on the flat side of the rail, the conjunction is not sufficiently close to exclude the rain; but on the contrary, acts as a reservoir, by which means the picket and rail are kept wet, and of course decay will soon ensue; whereas when nailed on the corner, there is but a mere point of surface, between the picket and rail, which will quickly dry out. Secondly, the surface of conjunction is so small, that paint, when applied, covers so much of the surface, that the oil will spread from each side and unite in the pores of the wood, and thus render it impermeable to water, if the paint does not cover the entire surface; and thus the picket is kept sound in every part. Thirdly, water immediately runs from the rails, and the powerful heat of the sun, by which they are checked, loses a vast deal of its influence by reflection; whereas when his beams pour almost perpendicularly on the flat surface, but few are reflected, and furthermore the whole surface of the rail can be covered with paint.

The nails should be driven just below the quadrilateral corner, through the picket, so that they will not be so much exposed to the action of the aqueous vapor of the atmosphere and the rain. After the pickets are nailed on, a ribbon one inch and a half square is nailed with double tenpenny nails, on the opposite side of the pickets, from the rails, into the rails.

The same position of the ribbon must be observed as of the rails. This not only adds to the beauty of the fence, but it holds each picket more firmly in its place, and prevents them from being knocked off by every little rap.

I will also give you a description of a post for board fence, which makes the most substantial, and I think, the cheapest fence, when we are at the expense of getting the posts sawed at the saw mill. The posts for such board fence, should be sawed four inches square, in the center of which there should be a place sawed one inch in thickness, to be taken out with an auger and chisel as far down as the surface of the ground. If it is desirable to have the ends of the boards pass each other, a piece of two inches in thickness should be taken out.

After the posts are set, the bottom boards are put in their place, and pinned firmly by boring an inch hole through the post and boards, and driving in a white oak pin. The upper boards are treated in the same manner.

Such fence is far preferable in low ground, where the posts are thrown up by the frost, to fence made by driving the posts and nailing the boards; because, in the first place, a post which is set in the ground, will remain more firmly, a longer period of time, in its proper position—is not as liable to be heaved out by the action of the frost, as one which is sharpened and drove; and secondly, some part of the fence is raised farther than the other; consequently, the nails break and the boards fall to the ground; whereas when they are pinned at each end, if one post is lifted a little higher than the other, the boards turn on the pins, and still remain firm.

Posts driven in dry ground, may stand as well as if they were set; but in all cases, I prefer the latter mode.

When posts are split for fence, I hew them after setting; and on the opposite side of the board, from the post, set a ribbon one inch and a half thick, through which the pins are driven into the post. This is nearly as good as the whole post, but does not make so solid a fence.

S. E. TODD.

Lansing, Tompkins co., N. Y., May 25, 1843.

Messrs. Editors—I here send you a portrait of my Short Horn and New Leicester bull "Dragon," (fig. 52), designed and engraved by our talented young artist, Mr. J. H. Fitch of Ithaca. Many of your readers will recognize it as a most faithful likeness, which will give great credit to Mr. F.'s skill as a painter and engraver. Dragon is three-fourths Short Horn and one-fourth New Leicester; sired by Great Western, dam Unadilla by Hollis' bull, g. dam Mr. Adcock's imported Leicester cow. Great Western sired by Volunteer, dam Niobe by American Comet, g. dam Norah by Frederick, &c. See Hard Book for remainder of pedigree.

Dragon is red and white, and a remarkably fine built animal, with great length of carcass. His "handling properties" are very superior. He possesses many of the valuable points of both the Durhams and Leicesters, and bids fair to make a splendid animal. He will be two years old in July. He received the first prize in the class of yearling bulls at the last Fair of our Ag. Society, and was exceedingly admired by all who saw him. Unadilla was bred by Mr. Robert Adcock of Otsego co., and is a most stylish and delicate animal, (half Short Horn and half New Leicester,) as all will admit who have had the pleasure of visiting Col. Randall's herd.

By the way, how is it that there is so large a portion of our farming brethren, who will not, or at least do not, take an agricultural paper? There are within a circuit of half a dozen miles about me, a large number of thrifty farmers, some of whom are worth thousands of dollars, and till hundreds of acres of land, who do not even take the trouble of attending our Agricultural Fairs; and as to paying a dollar a year for a farmer's paper, why such a thing would be thought by them outrageously extravagant. They prefer to go on farming in the old way, condemning every thing like improvement, and if they get their 25 bushels of oats, 45 of potatoes, or 20 of corn from an acre, they call it a "good yield," and are fully satisfied. Why, my dear sirs, although I have only been a practical follower of the principles laid down in agricultural works for about three years, yet I have already "improved my advantages" so as to be able to raise just three bushels of all kinds of grain, on the same ground that formerly yielded me but one, and with but little more expense to say nothing of the benefits which I have derived from the improvement of my stock.

I would not be deprived the pleasure, as well as benefit, of reading the Cultivator, for ten times the subscription price. Now brother farmers send on your dollar, and try it for one year, and my word for it, if you read it, you will never wish to discontinue taking it.

Caroline, May 15, 1843.

J. R. SPEED.

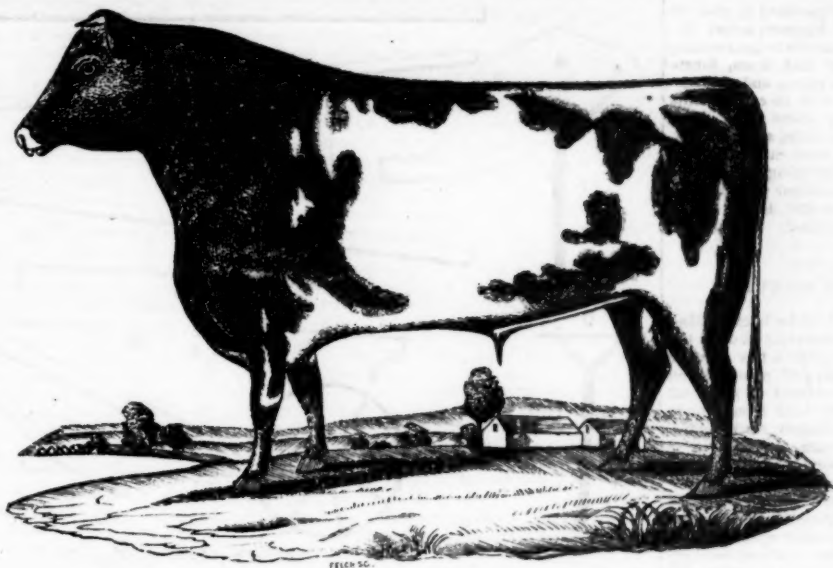
FARMING IN WARREN COUNTY, N. J.

WELL, Messrs. Editors, the *furor scribendi* has taken hold of your humble servant also, inclining me to do somewhat in return for the large amount of pleasure derived from the perusal of your journal.

Most farmers decline making contributions, because they have made no new discoveries—have no extraordinary stock or yield of crops—nor made any successful experiments. Now it is the observations and conclusions of men who keep their eyes open, whether for or against the thing or practice under consideration, that are wanted. But if these will not be furnished, the example of one of your correspondents, some months ago, from Chester co. Pa., might be followed; thus furnishing information respecting the soil and crops of their immediate district. But I proceed to apply the recommendation, and give you a short description of the farmers, farms, and produce of this county. And first of the farmers.

A large proportion, say two-thirds, if not three-fourths of them, own the land which they till, and this would lead us to presume a good degree of improvement; but we are still very much behind hand in this matter, though a better spirit has sprung up within a few years, and quite an advance has been made.

The modes of renting or leasing land are various; in fact, we have no well defined system of any kind. A lease for more than two or three years is a very rare thing. There is but little of the English system here, and but little land that is leased for money rent. The only settled thing seems to be that the tenant shall have house rent, fuel, pasture, and fodder for a cow or two, and a patch, not exceeding an acre, for a garden and a few potatoes. Sometimes the tenant gives only his labor for one-fourth of the crop, the landlord being to all the expense of team, utensils, feed, &c. Then again the tenant furnishes these, getting one-half or two-thirds, according as the bargain may be respecting taxes, improvements, and other matters.



"DRAGON," A SHORT HORN AND NEW LEICESTER BULL.—(Fig. 52.)

Bred by H. S. Randall, Esq., Cortlandville. Owned by J. R. SPEED, Caroline, Tompkins co. N. Y.

What the prospect then is, may be seen by an examination of the value of rents and yield of the lands of this district. It is supposed that about two-thirds of our region is limestone, and the remainder is made up of slate and granite formations. The bottom land, as usual in the valleys, has been the longest tilled, is in far the best state of improvement, and rates from \$50 to \$100 per acre. The hill or mountain lands present the best opportunities for investment, and are valued from \$15 to \$50 per acre, according to improvements. Our valleys are narrow and streams rapid, so that these last mentioned lands embrace the greater part of the county. The general size of farms is from one to two hundred acres, including from 25 to 50 acres of woodland.

The rotation generally followed, is, beginning with a clover soil, then corn or fallow, and winter grain, upon which clover seed is again sown. But most farmers sow oats and buckwheat, having less corn and fallow. In order to get a view of the produce and comparative profit, let us take a system varying a little from this, to which our lands are well adapted, and which will bring in the crops last mentioned. Take a farm of one hundred acres under tillage, cultivated as follows: 25 acres in clover, 25 acres in corn, 25 acres in oats or buckwheat, and 25 acres with winter grain. Our average yield with an ordinary season, would be as follows: 1½ tons of clover hay, (42 tons on 25 acres,) 40 bushels corn per acre, (1000 bushels,) 500 bushels oats and buckwheat, or 20 bushels per acre, and 20 bushels wheat or rye, giving 500 bushels of winter grain. These at our average prices, would bring about \$1,500, or yielding \$15 per acre for the farm. In the above, the clover has been rated as though all were mown, but three-fourths of our pasturage is got from clover, and the meadow and cornstalks relied on for fodder. So the proportion counted as corn, would be partly in other hoed crops, potatoes, roots, &c. This has been done to avoid going into a tedious list of details, embracing the various small produce raised on a farm. From this it will be seen that the owner of land would get about double the income in a favorable season, that he could obtain at the highest possible rates for leasing land payable in cash.

There is a good deal of stock kept, so that but little hay is ever sold, more than to supply some scanty neighbor who has overrated his supply of fodder, and to furnish what may be wanted in the villages, which are very numerous through all this region. Improved breeds of swine have been considerably introduced, but our cattle and sheep are principally common stock, save now and then a few flocks, with some of the Durhams and Merinos.

But this must suffice for the present, and if this prove acceptable you will hear from me again. Some remarks and inquiries I should like to make, but one can find almost any inquiry answered in the former volumes of the Cultivator, of which I have a complete set, with which I would not part for any agricultural work of the same price, I have ever seen or heard of.

A. R. D.

Hackettstown, Warren co. N. J., May 10, 1843.



MOLE TRAP.—(Fig. 53.)

MESSRS. GAYLORD & TUCKER—Observing your disposition to admit into the Cultivator whatever is useful, and that you have given place to Mr. Darling's Mole Trap, I will give you a description of one (not my invention,) which recommends itself for its simplicity, and

for the success of which I can vouch. Take a piece of inch plank six inches square, and in each end insert four spikes, six inches long, tapering from three-eighths of an inch to a sharp point; set them one inch apart; you can drive them into the plank by boring with a small gimblet. If they should be found to extend too far across the mole track, the points can be bent together by the hand. Nail this piece of plank with the spikes into it, on to a board six inches wide and four feet long, at about nine inches from the end. Set your trap with setting sticks, such as the boys use in setting bird traps, except that the end of the long setter must be made broad and shaped like a paddle, and beveled. Set the trap at right angles with the mole track, and bring the spikes directly across the track. Trample the track with your foot, so that the mole in passing will elevate the paddle end of the long setter and throw the trap. Four or five bricks laid on the long board will give it weight enough to drive the spikes through the mole. Any blacksmith will make the spikes for four

or five cents a piece, making the trap cost \$7½ or 40 cts. It is a good plan to trample the track two or three feet on each side. If the trail you can see from which direction the mole has come. Dig down on that side of the trap, and my word for it, you will find the mole pinned to the ground. Let the upright setting stick be long enough to elevate the lower point of the spikes an inch above the ground when trampled.

R. J. GOLDSBOROUGH.

Cambridge, Md., May 14, 1843.

SPANISH MERINO SHEEP

MESSRS. EDITORS—I have just taken the fleeces from the backs of seven Spanish Merino sheep, which I purchased last fall, with which to commence the rearing of a flock. And as I think their weights rather clever, I have concluded to forward them to you. I had in all, ten; nine 3 year old ewes, and a buck lamb of last year's raising. I selected three of the best ewes, judging from quality and quantity of fleece, to exhibit in their coats, at our Fair in the fall, and sheared the remaining six ewes and buck, and the weights of their respective fleeces shorn and weighed in the presence of several of my neighbors, (and since re-weighed by my friend and neighbor Mr. C., who is the owner of a flock of several hundred Saxons, and who rather doubted the report of my shearing,) are as follows:

No. 1. Buck, 1 yr. old, 5 lbs. 4 oz.	
No. 2. Ewe, 3 yrs. old, 4 " 8 "	
No. 3. " 3 yrs. old, 5 " 2 "	
No. 4. " 3 yrs. old, 4 " 8 "	
No. 5. " 3 yrs. old, 4 " 14 "	
No. 6. " 3 yrs. old, 4 " 8 "	
No. 7. " 3 yrs. old, 5 " 4 "	

34 lbs. 00

Averaging very near five pounds a head, aside from the tags. They were tagged before being turned into pasture in the spring, as were the other three, and the weight of all was just three pounds clean wool. Now, gentlemen, I am well aware that many of your readers will say at once, especially those who are sticklers for Saxony sheep, and perchance have got them for sale, that this was a small flock of choice selected sheep, and were fed high and well housed during the winter past; and that had I wintered a flock of several hundred, they would not have yielded more than half that amount. Well, as to the first part of the reply, it is true to the letter. They were a small flock, and well attended to during the winter; but no better wintered than stock of all kinds should be to make farming profitable. My sheep were fed plenty of hay three times a day, and oats twice, regularly throughout the winter, and had a comfortable shed open to the south, to which they could retire at their pleasure. And when turned into pasture in the spring, were in as good condition as when put up in the fall. Whether a large flock of the same kind of sheep treated in the same manner, would have fallen short of those weights, I am unable to say, not having made the experiment; but see no reason for supposing that they would not.

As to the Saxons, in large or small flocks, I have had some experience, and with me they have never averaged over two pounds and a quarter.

Very respectfully,

J. R. SPEED.

Caroline, June 12, 1843.

HOT AIR FURNACES.

THE "Subscriber" who inquires the cost of the castings for a Hot Air Furnace, is informed that Silas Richmond & Co. of Macedon, Wayne co., N. Y., manufacture

snow and frost, it should be brushed out, and every expedient should be used to promote the comfort and quiet of the animal, as it will save feed and increase flesh.

Raw potatoes, fed in small quantities with plenty of salt, during the last two weeks of gestation, is a safe and in my opinion the best feed that can be given to produce a sure secretion, and should be continued until the cow comes to her milk freely; one peck per day is a sufficient quantity for each cow. The strength of this feed may be safely increased with two quarts of provender meal, scalded or soured, and made into a thin slop.

Violent exertion, such as fighting, running, &c. should be prevented if possible at all times. If the excrement does not follow the calf within 12 hours, it should be carefully removed by hand, which will be less injurious than medicines sufficiently powerful to produce the desired effect. Cows should not be allowed to eat their excrement, but kept supplied with plenty of water, warmed to a temperate degree, and care should be taken to keep them perfectly dry and warm until they come freely to their milk; then the strength of their feed may be safely increased. But a proper medium and strict regularity should always be observed in feeding, in view of profit and the danger of over acting the system.

Some cows, being less fluent than others, will not bear as much feed; 4 quarts of provender meal per day, made into slop, as above directed, or one half bushel of roots, is strong feed, and as much as will pay a profit.

Cows should be carded every day, from about the 1st of March, until they are turned to grass, which tends to keep up a healthy circulation in the extremities and is a good substitute for exercise.

April is the best month for dairy cows to come in, after which period they should be kept fluent, if possible, till they can get plenty of grass. It is bad for cows to get reduced in vigor and flesh in the commencement of the milk season, as it will require much food in the best part of the season to recruit them to a healthy fluent condition. I would as soon start with my family upon a journey, in a poor worn out vehicle, which I knew would require me to lay by upon expense, to get it repaired, as to attempt to make a profit from cows poorly wintered. It may be relied upon as an unexceptionable rule, that cows will not yield their abundance in quality or quantity, unless they have been well wintered, so as to commence the milk season in a vigorous and fluent condition.

Strict attention should be paid to milking clean at this period, that the course of the milk may be thoroughly established in the system in the commencement of the season. Children should not be allowed to milk until they are strong enough to milk quick and thorough. Many cows require a thorough exercise of the bag to get the milk clean.

If a cow does not come to her milk fluently, she should be fed a common musket charge of gunpowder, or an ounce of floured sulphur, every other day for six days, which will increase the action of the fluids, and secure an increased flow of milk. During this process, the cow should not be fed largely with strong feed; her feed may be moderately increased with the fluency of her milk. I protest strongly against the practice of feeding dry, unscalded or unfermented grain feed to milk cows at any time, (except as a medicine in some cases, which I will notice hereafter,) as it must necessarily absorb much of the gastric juices of the stomach, instead of adding to them in the process of digestion.

Cows are many times troubled with cracked teats in the spring, which makes troublesome milking. This may be remedied by a few applications of the oil of pumpkin seed. If this cannot be procured, use the lard tried from bacon rinds, or the outside of bacon trimmed off, which is most strongly impregnated with smoke. The application should be made previous to milking, which will soften the teat and prevent further cracking, and work the oil into the wounds unhealed: these are the best specifics I ever tried.

As this is the season in which dairymen procure most of their rennets for summer uses, I would earnestly caution them against bad rennets. A good coagulator is an indispensable prerequisite in the manufacturing of cheese, and much depends upon its being properly saved. When the rennet of a calf is to be saved, it should have plenty of new milk, and be kept from taking any unclean substance into its stomach, which would make it necessary to rinse the coats of the rennet and destroy its vital strength. The calf should not be killed with a full stomach, as the gastric juices are then employed in digesting and discharging its burthen, and are not found in full strength in the coats of the stomach. Nor should they be kept a long time without milk previous to being killed, for in this case the system would continue its draft upon the juices of the stomach until its digestive powers became exhausted, and thus render the rennet unfit for use.

This is proven by the well known fact that animals can bear but a small quantity of food without injury, after a protracted abstinence. This is apt to be the case with rennets saved by butchers, as they are in the habit of keeping veal calves several days without food, to accommodate a market. The rennets, after being thus spoiled, are thrown into a brine prepared to receive them for the season, as the best facility to obtain the dairyman's nimble shilling for a rennet. I have known the whole strength of two rennets thus preserved, used in a cheese of 100 lbs., without digesting the milk sufficiently, besides making the cheese very rancid. I am not in favor of putting rennets in brine or pickle to preserve them, as it is difficult to make a composition that will control the acids of the stomach, or prevent a partial fermentation of its gaseous properties. The only sure method of pre-

serving those properties in their full strength and purity, is by drying them in pure air. Calves should not be killed for their rennets, until they are four or five days old, during which time they should have plenty of new milk to acquire a healthy and strong digestion. Twelve or fifteen hours are required for a common feeding of milk to digest and pass out of the stomach, at which time the gaseous secretions are strongest and most abundant. The rennet should then be taken cleanly from the chest and carefully emptied of its contents, without scraping or rinsing, as that would destroy the mucus coats of the stomach. It should then be stretched upon a crooked stick or bow, and left open at each end to let the air pass through and quicken its drying. Then apply what fine salt will adhere to it on all sides, and suspend it in a dry airy place, to remain until wanted for use. Rennets thus prepared will be of good flavor, and sufficient strength to digest 600 gallons of milk if prudently used.

Many dairymen save and use the curd in a calf's rennet, as a matter of economy. It may be a general practice, but it is nevertheless a wrong one. It may be argued that milk when taken from the stomach of the calf, partially digested, contains much of the digestive properties of the stomach. I admit it does; but it is in a state of decay, and contains other properties which render it unfit for a wholesome digester, and if used separately will make a hard rancid cheese. Decayed apples will make cider, but the quality will be inferior to that made from ripe sound fruit, and there is a like difference in the quality of cheese made from the curd and that made with the pure rennet.

Cows should not be allowed to range the fields in the spring, until there is sufficient grass for them to get their fill. First, because it has a tendency to take their appetite from hay, and creates an uneasiness which will make them discontented with their necessary confinement during the summer. Secondly, nature has prepared the soil by freezing, which leaves it light and gives the new succession of roots an opportunity to spread and give birth to new and more numerous blades; and the soil should not be trodden down until this process is well advanced, when the sod will become so firm as to prevent the soil from being packed by the travel of the cows. I think this rule will admit of general application, as there are few soils in the dairying districts that are improved by packing.

Thirdly, early grazing is injurious to pastures, because it weakens the vital principle of the plant. It is a fact well established and easily demonstrated, that the root of a plant cannot flourish nor long exist without the top to assist in procuring its necessary food; the vigor and growth of the root will be in proportion to that of the top. On plowing a pasture that has been closely grazed for several seasons, a weak slender sward will be found, and but little necessity for a coultter. When the sward is kept thus light, the soil is but little benefited by transmutation. The principle has long been established that the growth of plants is produced in a great degree by absorption of their food from air and water, the top of the plant being the necessary vehicle through which it is obtained and a portion of it conveyed to the root, thus mutually contributing to each other's support. Water is found to be the chief food of plants, as it contains the gases necessary to vegetable life, and a portion of earth bearing a strong affinity to the main bulk of vegetable matter, this is most congenial in the dew which becomes strongly impregnated with gases in its descent from the air.

Admitting this theory to be correct, (and I am unwilling to believe any reflecting farmer will doubt its truth,) it behooves the grazier to keep his pastures from being trodden in spring, and preserve the first growth of grass to strengthen and invigorate the roots. A good fleece of grass not only benefits the roots by absorption, but retains the frequent showers and nourishing dews from speedy evaporation until the earth is well supplied with its genial qualities, and vegetation can drink its fill and have the benefit of the sun's heat in digesting its properties.

The grazier should not feel that he is losing ground, if winter overtakes him with a heavy coat of fall feed upon his fields, unconsumed, for it is money put to good interest, and sure to be paid the coming season. It not only shields the roots from frost and cold drying winds, but seems destined by nature for the propagation and nourishment of its successor; as all young plants are found to come forward earlier and grow more rapidly when nourished by their decayed predecessor; hence this rule will apply strongly against the practice of grazing meadows fall and spring, which is common among our dairymen, as a matter of convenience with some, and necessity (from heavy over stock,) with others; but neither convenience or necessity, (particularly when occasioned by over stock,) are a sufficient excuse for continuing the practice, for I am satisfied the grazier had better dispose of a part of his stock for what it will fetch, even at the lowest extreme of the market, than to thus over tax his soil.

When the proper period arrives for turning to grass, cows should have plenty of salt, and should not be allowed to graze but a few hours at a time until they get accustomed to the change of feed. They should have all the hay they will eat until the grass acquires sufficient heart to sustain them without "scouring." Should they have a tendency to scour, a few quarts of wheat bran may be fed with good effect.

A greater quantity of feed may be obtained from a given territory, by dividing it into separate lots, but I think cows will do better to have free access to the whole; as

a few times shifting them to different lots of better feed, will create an uneasiness, until at length they will become dissatisfied with the best shift that can be made for them. The more quiet cows can be kept, the better they will do. Another objection to a shift of pasture, is, that cows are apt to over eat when turned to fresh feed, which is very hurtful. Cows are frequently attacked in the early part of the grazing season with a high fever, attended with trembling and a general agitation of the system, shrinkage of milk, dryness of the nose and cold extremities. This more frequently happens after long rains, when they have taken a great proportion of water with flashy grass. When a cow is thus attacked, she should be fed with two ounces of the flour of sulphur, or two common musket charges of gunpowder, in some kind of mash or slop feed, which will generally effect a cure. If the case is severe, a half gallon of blood may be taken from the neck, and the bag should be frequently washed in cold water to prevent the fever from settling there. There is but little danger of an attack of this kind, if cows are fed with plenty of salt, and one ounce of sulphur per week, which also adds to the fluency of the milk, and makes the cows more sure to get in calf in good season.

The farmer should destroy all bushes and trees in his fields. I am in favor of furnishing a proper shade for cows in the heat of the day, but opposed to shade trees, because they prevent an equal distribution of manure; the soil about the trees will become very rich, and the trees being stationary, no benefit can be derived by tilling within their influence. Nor is this the only objection; forest trees have a strong attraction for the vegetable elements with which the atmosphere and dews are strongly impregnated; hence their affinity for these properties will secure them to their own use, before the weaker class of vegetables below can reach them. It is for this reason, that grass grown in bushy pastures and orchards, is not so sweet as that which grows in the open field, robbed as it is of its vitality by a higher and stronger class of vegetables. I therefore prefer artificial shades when necessary, which may be cheaply constructed with crotches and poles, covered loosely with old boards, slabs or brush, which will answer a good purpose, and may be moved annually, to enrich those parts that need a partial treatment. Then if occasion require the ground to be tilled, there will be an equal distribution of manure, and no roots to impede the progress of tillage, nor forest trees to absorb and drink up the proper food of the cultivated plants. Two men with a team will build shade sufficient for 40 cows, in a day. Cow's horns should be made blunt, by sawing off the ends, or putting on buttons, to prevent their wounding each other.

There is a great risk in old cows coming in after accumulating flesh on grass; feeding plenty of salt and taking several small bleedings previous to calving, will generally prevent an attack of fever.

(To be Continued.)

BREAKING HEIFERS, MILKING, &c.

EDITORS OF THE CULTIVATOR.—One who has perused your paper with interest, who has found therein something to amuse, more to instruct, and still more to promote thought and inquiry, is willing to contribute occasionally to its pages, some portions of his own limited experience, if it is worth the room it may occupy.

First, with regard to breaking heifers to the pail. Many are spoiled by bad management; as a heifer may be a fine animal, and a deep milker, but yet of little value to the dairy, if inclined to kick over the pail as soon as you get it full. There are cases where nothing more is necessary than to turn them in a pen ten feet square, and after gently handling, proceed at once to milk them. But I am convinced from considerable practice, that the best way and most expeditious in the end, is to tie up the animal with a noose over the horns, to a suitable place about as high as its head, with not more than one foot of spare rope; as there is much less danger from flouncing with a short rope. In a few minutes the animal will display signs of violent anger, followed probably by a second or third fit; when these have subsided, she may be milked carefully, and an experienced milker need fear no kicks; after the first or second milking there will be no difficulty; she quickly becomes accustomed to the rope, which may be continued a week or more if necessary. She will show a preference for that place awhile, but soon will be glad to be milked any where. Do not feed her while milking, or else she will refuse to be milked without her feed very commonly.

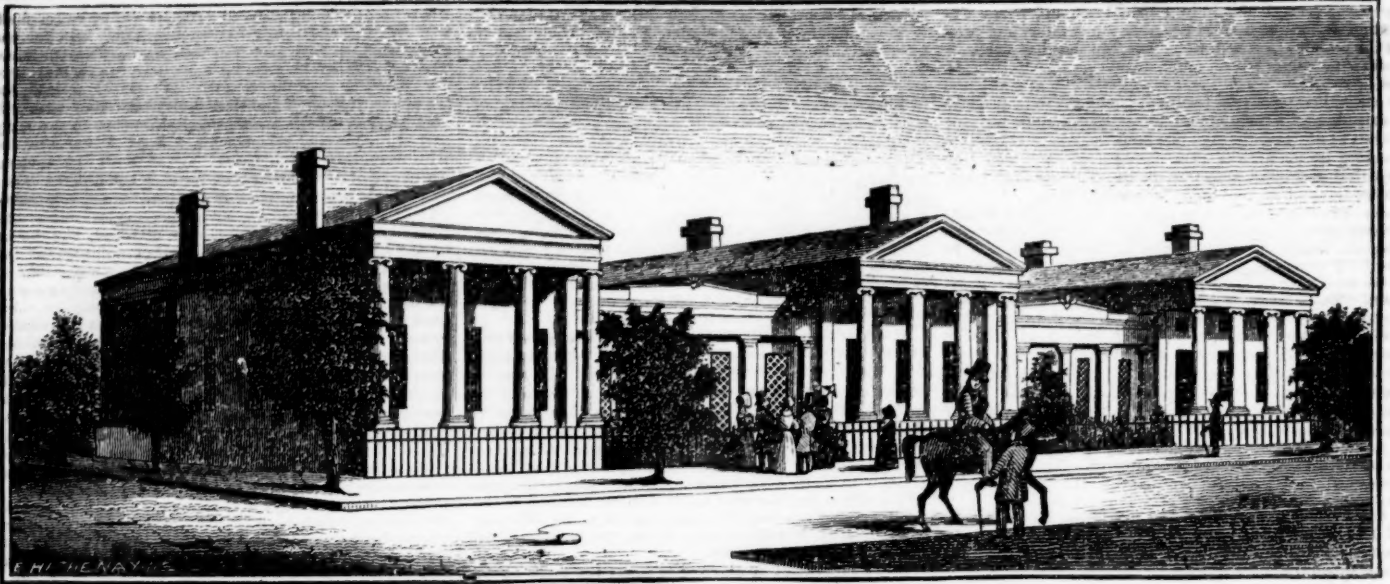
Sore teats should be attended to in season. White lead and linseed oil, made in a thick paint, is the best application that I know of.

One word as to milking, especially heifers or cows inclined to kick. Use no stool, sit close up with the left side and arm inclined towards the cow, which makes the work easier, and gives less room for a blow; and let the left knee project in such a way as to protect the pail, which, if needs be, may be kept pretty well back. In such arrangement there is little danger, and often a saving of much vexation. Gentle treatment is much the best.

Farmers lose much annually from not using their eyes in the cow yard, or having some one there directly interested. Hired men and boys can seldom be trusted entirely with the cows. What I have said of milking, will not apply to women; they are sometimes excellent milkers, but it is not so easy for them to protect the pail.

A FARMER'S BOY.

Quaker Hill, N. Y., 1843.



COTTAGE ROW, TROY, NEW-YORK.—(Fig. 54.)

As the Editors of the Cultivator seem anxious to "improve" every thing for the gratification, comfort and convenience of man, it affords me pleasure to be enabled to furnish the above drawing by HATHAWAY, of Cottage Row, situate in the southern part of the city of Troy, on the corner of Second and Liberty streets.

The principal front is on Second street, occupying a space of one hundred and twenty-five feet, and consists of three cottages occupying the corner, center, and south lots; the two remaining lots are appropriated to tastefully arranged flower beds, grass plats, shrubbery, etc. The flower beds are fronted with a high fence or screen, finished in a style of architecture corresponding with the cottage fronts; it has openings similar to windows, which are filled with lattice work, which admit a partial and pleasing view of the ornamented grounds from the street; there is also through this screen a gate of entrance to the grounds. The cottages are finished in front with porticoes of the Grecian Ionic order, of four columns, supporting an entablature and pediment. The front is placed back from the line of the street about eight feet, leaving an enclosure for shrubbery. The principal floor is raised about three feet above the level of the street, admitting cellars, &c. The front on Liberty st., is composed of the flank of the corner building, with the entablature of the portico continued across it; at the east end of this front, is an inverted portico, leading to a room suitable for an office, which however is connected with the other parts of the house.

The entire is finished in a neat and substantial manner, containing on the principal floor, the entrance hall, two parlors connected by sliding doors, a breakfast room, bedrooms, and several other smaller rooms; the second story, which is partly in the roof, is occupied for sleeping rooms. The buildings are small; but the three taken in connection with the screens, as a whole, present a chaste and pleasing appearance.

This pretty spot was designed, built, and is now owned by that enterprising citizen, NORTON SAGE.

ALEXANDER WALSH.

Lansingburgh, N. Y., June 12, 1843.

NEAPOLITAN HOGS.

Messrs. GAYLORD & TUCKER—From the repeated inquiries made to me, regarding my opinion of this breed of swine, I presume a description and some account of their origin, may not be uninteresting to the readers of the Cultivator.

The first Neapolitan pigs introduced into this section, were imported in 1838, by Henry Holland, Esq. of Ballston. In the summer of 1839, Mr. H. presented the writer with a pair from the first litter. In color they were similar to the Elephant, a sort of lead or slate color, with a belt or sheet of white covering their shoulders and part of their body; with little or no hair on them, resembling in that respect, the African dog, the Elephant, and the Rhinoceros, which at first sight gives them rather an unprepossessing appearance; and I never knew but one person that first looked on them, but turned away from them, exclaiming, "Well, I don't like them."

In many points they much resemble the Berkshire pigs; the head is small, ears upright, small, and handsomely formed; bodies long, round and straight on the back; ears large and full, like the Berkshire; tail long, small, and without the *kiak*, so common in the Berkshire breed. They have a keen, black, piercing eye, and a peculiar knowing look or wise countenance. In size they will rank below medium, as from my experience, I much doubt whether they can be made to exceed, at maturity, over 300 lbs.; from 200 to 250 lbs. would probably be a fair estimate, at from 18 to 24 months old; but then, like improved Chinese, they are easy and quick feeders, and

are valuable for crossing with the larger and slower growing sorts.

About the same period, or soon after Mr. H. imported his Neapolitans, James G. King, Esq., when in Europe, purchased a pair, for which he paid the liberal price of \$160, and sent them home to his beautiful residence at Hoboken, for the purpose of introducing this valuable breed of swine in his native country. After breeding them for several years, with a commendable and praiseworthy liberality, he distributed many of them among his friends, (and among whom the writer was fortunately classed,) and in the fall of 1841, he presented to the N. Y. State Agricultural Society ten head, including the imported ones, to be exhibited at the Fair at Syracuse, and to be sold at auction, and the avails added to the funds of the Society. At the time appointed for the sale, a storm set in, which so dampened the ardor for improvement, that no bids could be obtained, and they were distributed among some of the members, who were to report at the meeting of the Society in 1842. I regret to say no reports were made, and the only mention made of them was by our worthy Corresponding Secretary, H. S. Randall, Esq., who in his report of the agriculture of Cortland co., published in Transactions of 1842, says:—"I regret to state that the fine imported Neapolitan sow, presented to the State Ag. Society, by James G. King, Esq., and which by a vote of the board was placed in my hands to test the comparative value of the breed, perished before reaching my residence, in consequence, probably from injuries received on ship board."

The two presented to the writer by Mr. King, although now two years old, the sow has never bred, nor is there any prospect at present of obtaining pigs from her. Notwithstanding she is scurried in her food, still she keeps in high condition. It seems quite an effort for her to get up and eat her meals. She is certainly the laziest animal I ever saw. Why, she is too lazy to squeal or even grunt. Not so with the boar, for he is wide awake, and would match in a race, the leaper, described by Lansingburgh, page 52, vol. V, of the Cultivator.

I have crossed the Neapolitan with the Berkshire and improved Chinese, fattened, slaughtered and eat them, and must confess I found the pork superior to any other I ever tasted.

C. N. BEMENT.

Three Hills Farm, June 20, 1843.

MICHIGAN SOIL, FARMING, &c.

EDITORS OF THE CULTIVATOR—There is perhaps no wooded country to be found, that can be more easily reclaimed than the oak openings of Michigan. The usual custom of the first settlers of these lands is to girdle, plow and sow, the first year; and unpromising as it may appear, I am told the first and second crops are generally reckoned among the best. The soil is of a sandy nature, generally level, and easily broke up and cultivated. But the course pursued in the management of land is essentially an exhausting one, and should it be continued, it is easy to see that at no very distant day these fertile plains will be hardly worth possessing. Perhaps I came here expecting too much—expecting to see the agriculturist convinced (perhaps by experience at the east,) of the bad policy of the exhausting system, and endeavoring by all the means in his power to collect materials to keep up the fertility of the soil; but such is not the case, and perhaps will not be, until the inhabitants shall feel themselves more permanently settled. This is truly and emphatically a moving people, and mid-summer as well as mid-winter, forms no obstacle to "selling out;" a few days only are necessary to find the seller established and "staying" in another place. While such a state of things exist, and the owner or occupant of a farm feels that the present crop may be the last he will gather, it is proba-

ble the skinning system will not be abandoned. While deploring these things, I have often thought of a remark made by my father, whose opinions I have always found entitled to respect, that in emigrating you should inform yourself by reading or otherwise, of the most fertile districts in the country to which you intend emigrating, and then visit beforehand personally, and if possible accompanied with your family, that section; then make your choice, and from thenceforth, extraordinary excepted,) to consider it your permanent home. Can a farmer reap the benefits of a scientific and well digested system of agriculture and be a mover?

And now while upon the subject, allow me to make a few remarks about emigrating to a new country. Whoever comes here expecting to realise one-half of the pleasure and "far delights" that a fertile imagination will conjure up when seated in the comfortable apartments of a farmer's cottage, with perhaps a smoking breakfast, dinner or tea before him, will be disappointed. One moment's cool reflection, or at least a few month's trial, will satisfy the most skeptical, for in the nature of things it cannot be. It must, and it will take years, before the beginner will have those thousand little comforts and conveniences—aye and great ones too—about him, that he has left behind. There may be romance enough in the idea that you have emigrated, to sustain you a few times in going twenty miles to mill with an ox team, or a quarter of a mile after water, yet it is thought that when "tired nature" shall list those significant words, "uncomfortable," and "inconvenient," it will effectually banish the bright dreams of the imagination. Above all things does old age and pioneering seem incompatible. Reflect and hesitate long before you tear up those old deep rooted affections to transplant in another and a newer soil. They cannot flourish again, and perchance may die. Young trees may bear the transplanting, but the old deep rooted and established should not be moved.

Respectfully yours,

Waterford, Oakland Co., Mich., 1843.

G. COOK.

500 REASONS WHY LAND SHOULD BE IMPROVED.

MORE can be cultivated with the same hands, because tilled with less hard labor.

Briers and shrubs disappear, and grasses appear. Cattle damage the land and grass less, because they do not have to tramp so great a space to fill themselves.

Less land required; less fencing.

Less trotting after cows and horses.

Less work at the smith's shop.

Fewer whips worn out.

Stronger teams.

More manure, and less need for it.

A stimulus to action.

A protection against winter's frost and summer's heat.

A good example to children and neighbors.

Keeps off sheriffs and buzzards.

Stops emigration.

Produces money for books, and time for reading.

Surplus time and money for erecting buildings.

Also school houses and churches.

Produces time to travel, to lecture on economy and preach the gospel.

Produces sociability and hospitality.

Makes a paradise of a barren, plenty out of poverty, a blessing out of a curse.

The barn is filled, the dairy is filled, the purse is filled, and the soul is filled with gratitude.

If the reader will reflect, he will discover that the number of good reasons why the farmer should improve his land, is almost innumerable.

D.

Amherst, Va., June 18, 1843.

HIRING HELP.

MESSES. EDITORS—How common is the saying among a class of our farmers, "Oh, I can't afford to hire." The truth of the remark we are frequently, though reluctantly forced to admit. This class you will generally find to be an honest, well meaning, hard working set of men, who deserve a better reward for their toils than they get; notwithstanding they are the very ones, I dare assert, who annually scrape over double the number of acres they ought, of land already exhausted by the unskillful husbandry of their fathers, and perhaps grandfathers before them. (This tenacity to old habits, which have no other recommendation but their antiquity, has been, and is yet a serious hindrance to the improvement of our agriculture.) Their broken down fences afford poor protection to the scanty crops which they have extorted from the earth. Their ill fed cattle, exposed to the peltings of winter storms, are suffered to roam at large about the farm or highway in search of food and shelter, leaving their manure, of so much value to the farmer, exposed to bleaching winds and rains, or where it cannot be available by them. This is indeed a lamentable state of things, but no more deplorable than true; and you will generally find the other arrangements of the farm corresponding. But to our text. We do not pretend to say hiring help would better their condition or remedy existing evils, for they most assuredly cannot afford to hire help under this state of things. It would be preposterous to hire men to do that which will not half pay. The success of employing extra labor does not depend so much upon the amount of labor employed, as upon the proper application of that labor. Labor is capital; capital is money. Thus money, capital and labor, are the same; and it is evident the more money is profitably invested in any business, the greater the income to the capitalist. This fact being established, proves the ground we have taken tenable; namely, that farmers can afford to hire help. Look at the iron manufacturer, or the proprietors of any of the manufacturing establishments in our country; with the labor of his own hands alone, he can barely obtain support for himself and family. His prosperity mainly depends upon properly directing the operations, not only of his own hands, but of others.

Now the question arises how shall the farmer make a proper investment of such capital. Recent surveys, and more particularly agricultural periodicals, throw much light on this point. Read and adopt, for the skinning, the system of manures and rotation. Husband your manure as carefully as your money; make your hogs work; turn all refuse straw and vegetable rubbish to some account, and you will not fail of success. In conclusion, let me say, that if you conduct your farming operations in such a manner that you cannot afford to hire help to put every acre under good cultivation, you cannot afford to work yourself; you had better sell your acres and "hire out," for if wages are too much to hire, the "day laborer" has an advantage over you; choose his occupation at once. *Bridgeport, Conn., 1843.* H. S.

SEEDING GRASS LANDS, &c.

MESSES. EDITORS—In a former communication to you, I stated my opinion that the raising of wheat by us Long Islanders, was only incurring a large expense in the outset which could never be repaid by the crop itself; therefore, last year, in spite of the remonstrances and ridicule of my brother farmers, I determined on laying down a field to Timothy alone; and believing that it was the wheat and not the grass that was the great exhauster of the soil, I argued that it was useless to put the same quantity of manure on the lot that is found to be necessary for wheat. I therefore put only about two-thirds the amount to the acre, and sowed it thickly in the month of October; and at the present time, (taking into consideration that my seed should have been put in two months earlier, and that we have had extremely dry weather for nearly a month,) my grass is looking finely, and I have every prospect of a good, though a late yield of hay, the present year; and I think the fact of one-third of the manure being saved by this process, and of being enabled to cut a crop of hay the first season nearly or quite equal in value to a common crop of wheat, should cause the experiment to be fully tried.

The year before last our fields were covered with that pest "Johnswort," and I went to the trouble in one instance, of cutting the weed down before the seed had ripened, raking them together, burning them, and then plowing the lot early in the fall; but it was labor thrown away; for the next season from some (to me,) unaccountable cause, the weed entirely disappeared from this section of country.

Appropos of seeding down to grass. How would it answer to manure as I propose above, in the spring, and seed it down with barley, timothy and clover? Would it cause the barley to lodge, and would the timothy be likely to do well planted at that season? In the vicinity of my house is a very steep hill-side, covered the last spring chiefly with dog-wood, which I had cut down and drawn down the hill by hand; thus having the same effect on the crumbly soil as a fine or bush harrow. This hill, without other preparation, I seeded with timothy, and this year it has the luxuriant appearance of a new meadow, bidding fair to yield good pasture, where before nought but weeds or coarse grass grew.

Can you tell what manure is the best for me to apply to a poor sandy gravelly hill field, to enable it to produce good grass, and resist the effect of the summer sun? Loam I have in abundance, but the field is so siding

that some more portable amelioration of the soil is required.

I speak from experience of its good effects as a manure, in recommending those having opportunities of obtaining sawdust, to fill up all holes in their pig pen and cow yard, and covering the bottoms of both with it, for it certainly makes a strong, portable and retentive manure.

It will retain much of the more valuable parts of the manure that would otherwise be mostly lost.

I see in your paper, frequent mention of, and answers to inquirers, on the various kinds of straw cutters, but the great objection to them is that the price is too high to authorize owners of small farms to purchase them. Can you inform me of any whose size and price corresponds with the labor required of them, on small farms of from 30 to 60 acres? A. W. L.

Hempstead Harbor, L. I., May 19, 1843.

* We have long been in the habit of seeding lands to grass, in the manner respecting which our friend inquires, with the exception that we prefer spring wheat or oats, to barley, to sow with the seeds. The reason is, barley covers the ground more fully than the other grains, and as the young grass necessarily springs up and grows in the shade, if a hot sun and dry weather follows the cutting of the barley, it is frequently destructive to the grass. From this cause we have sometimes failed with grass seeds, when sown with barley, but rarely, if ever, with oats or spring wheat.

† It is evident no light portable manure, will correct the sandy light soil, of which our correspondent complains. It requires more firmness, and additional power of retaining moisture. This is best given by the addition of clay in some form, and a clay marl would be the best of all. Loam would be useful, but its effect, or its durability, much less than that of clay or marl.

‡ We know of no straw cutter which combines the strength and facility of execution which this implement should possess, which can be afforded at less prices than those at which the improved straw cutters are sold. On a farm of not more than 30 or 40 acres, a straw cutter on the old plan of a guillotine blade and lever, would, when well made, answer every purpose, and would not cost more than from three to five dollars. The expense of this implement, as of all others, must depend on its perfection; and a straw cutter calculated to make chaff for a hundred head of cattle, must be expected to cost more than one required only to do the work for a dozen head.

CRESCENT BUTTON.—(Fig. 55.)

A CHEAP SUBSTITUTE FOR WINDOW SPRINGS.

MESSES. EDITORS—Having adopted a very simple fastening for window sashes, I offer a description for your valuable paper, as it may benefit some of your readers, and save them the expense of spring fastenings. It is a button in the form of a crescent, about 2½ inches long, and attached to the sash on the left hand side, by a wood screw. It should turn easy on the screw, so that it may move by its own weight. When the sash is down, the upper end drops into a notch in the casing, and fastens it down. To raise the sash, place the thumb of the left hand on the lower end of the button, which will withdraw the other end from the notch, and allow the sash to be raised; and to fasten it up to any required distance, press the lower end into the notch in the casing made for that purpose, and allow the weight of the sash to bear on the button before withdrawing pressure. To let down the sash, merely raise it so as to remove the weight from the button, when it will leave the notch, and allow the sash to be let down with one hand. The button may be made of any kind of firm wood, or of brass. F.

Salubrity, S. C., 1843.

BEST SYSTEM OF FARMING.

MESSES. EDITORS—I wish to make some inquiries of you and of your numerous correspondents, and also to state some facts, for it is upon these only that we can rely for improvement in our agriculture.

I have noticed that the correspondents of your excellent paper have recommended to us inexperienced farmers to adopt a better system, and rotation of crops, but have unfortunately failed to inform us what that best system and course of rotation was; and that is precisely what we should most desire to know. If you, or any of them, would state what is the system and course of cropping best adapted to soils rich enough to produce wheat, corn, oats, and roots of all kinds, or what would be still better, the system necessary to make our poor soils rich enough for such a course of cropping, a real benefit would be conferred on the community.

It is often the case, in this section of country at least, that a young man comes of age and receives from his father 100 acres of land, more or less, and he settles upon it, thinking to make a support for himself and family. But he finds the land worn out, and the crop hardly paying for the labor. He is industrious, and collects and uses all the manure possible; but all are aware that where

the land is poor, the manure piles are poor also, and he finds that he can till it out of the soil faster than he can return it to the soil. Now is such a man to get a start up hill? He has to look to the farm for his living, paying off his hands, &c., and too often at the end of the year he finds himself in rather a tight fix, and experiences no little difficulty in making, as friend Robinson says, both ends meet. There are many of us who would be glad to start right, if we only knew or could be told how, and not be left to guess and surmise for ourselves. My soil is clay loam resting on red or yellow clay, and stable manure and ashes will bring good crops. Lime appears to be of little benefit, or I did not apply it right. I put it on in the fall, and turned it in the next year for corn. *Kent co., Del., 1843.* J. G. CHAMBERS.

We hope some of our correspondents acquainted with the best mode of treating such soils as that described by Mr. Chambers, will respond to his inquiry, and lay down not only the best mode of rotation on such soils, but the best course of restoring them to fertility when exhausted by improper treatment. We once heard a young man complaining to an old and experienced one, whose success in farming gave a value to his opinions, that he was unable to manure his land sufficiently to produce good crops. "Then manure less," was the reply of the veteran; "if you have only manure enough for five or ten acres, apply it to five or ten acres, and not spread it over twenty or fifty. A soil properly constituted, if once made rich, and then well treated, is made rich forever. My farm was an exhausted one like yours, but I made it an invariable rule to cultivate no more than I could place in the best possible condition as I went along. If it was only five acres, well; if twenty acres, so much the better. Remember when your land is once rich, under a good rotation of crops, but little manuring will be required to keep it so, or indeed constantly improving." This, at the time, we thought sound doctrine, and many years observation has confirmed this opinion. Our friend, if he has peat, muck, or even turf at his disposal, may treble his manures by composting his stable manures, ashes, &c. with such matters, in the manner adopted by the best farmers. We should think from the description of the soil, that lime, or rather a sandy marl, would operate favorably in its amelioration; but this is a manure from which immediate effects can rarely be expected.

The way for the young farmer to "start right," may be expressed in two words,—industry; economy. Industrious in labor, industrious in the employment of time, industrious in the accumulation of knowledge, the farmer and the mechanic must be, or he has no right to expect success. Living a life of industry, does not imply a life of servitude. To suppose this would be as unjust as to imagine that a life of action must of necessity be a life of misery. Industry implies health, usefulness, a capacity for happiness, and the power of attaining it. Economy is not less essential than industry to the man who would start right. It is not enough to earn money; the proper mode of disposing of it should be well considered. The great error of farmers, (and they are not alone in this matter,) is a proneness to run into debt. More men have been ruined in the United States, by having such good credits, than by any, or by all other causes. One half the articles that are now purchased on credit, would never be purchased at all, if the cash down was demanded. When men purchase on credit, they are apt to consult their imagination or inclination; when they purchase for cash, they consult utility and necessity; and this alone will reduce the length and amount of their bills amazingly. But the man who is anxious to start and progress right, will be extremely cautious how he adopts or practices any system, which under the name of economy, prompts him to cut off the fountains of intelligence, and dry up his sources of knowledge. He knows that improvement is the order of the day; that the age is one of progress; and that he who does not keep pace with the movement must be crushed. Such being the case, whatever may be his pursuit, he reads, reflects, compares, and would consider that as fatal parsimony, which cuts off the means of performing all these things understandingly.

EFFECT OF CHANGE OF CLIMATE ON CATTLE.

MESSES. EDITORS—I, as well as many of my neighbors, should be pleased to hear from you respecting the effect of change of climate on cattle, and the proper treatment required. For instance, we have the (English) Durhams, &c., brought from Kentucky, Ohio, &c., and it is a rare chance that we can get them to live through the first season. WM. CLIVE.

Fort Adams, Miss., 1843.

As the ox is found in all latitudes and climates, from the equator to the 60th degree of latitude, or even higher, we are unable to see why any variety of this animal should not succeed as well in Mississippi, as elsewhere. With the ox, more is depending on the food he receives, than on climate; and if our friends in the south will provide suitable pastures of clover and the other cultivated grasses, with roots, turneps, carrots, or beets, for use occasionally, or during the winter months, we think the Short Horns will succeed as well there as elsewhere, or as well as any other variety of cattle. There is not more difference in the climate of Kentucky and Mississippi, than between that of the Scotch Highlands and Somersetshire in England, and yet annually, thousands of cattle are driven from the north to be fattened in the warmer climate of the south. Attention to the kind and supply of food, will doubtless obviate the necessity of recourse to any other mode of treatment to insure success.



THE WILD HORSE.—(Fig. 00.)

Veterinary Department.

MANAGEMENT OF THE HORSE.

Messrs. GAYLORD & TUCKER—The accompanying cut of a Wild Horse, gamboling in his native freedom, is a fancy sketch, from the "Spirit of Humanity," a compilation of numerous and weighty authorities in favor of the kind treatment of animals. It seems passing strange, while the treatises of the Encyclopedias, Agricultural Societies, and various talented and experienced individuals, strongly recommend the milder course for the benefit of the human race no less than the brute, that the lords of creation should so frequently and so grossly trespass and pervert their prerogative of dominion into tyranny. With the engraving, are two or three extracts from the "Stable Economy" of John Stewart, a very clever, practical and philosophical writer, and like his countryman John Lawrence, a friend of man and of horses. Their excellent essays would well bear republication in this country, in a cheap form. Being aware of the very extensive field from which the Cultivator is supplied, the selections offered below are quite limited.

J. R. A.

Docking.—In this country the horse's tail is regarded as a useless or troublesome appendage. It was given to ward off the attacks of blood-sucking flies. But men choose to remove it without being able to give the horse any other protection from the insects against which it was intended to operate. The tail may be very useful in some respects, and in the good old times it was permitted to flourish as it grew, being only bound when it troubled the horse's rider. But in times like these, when men clamor for freedom, and practice tyranny, it must be cut off.

If it is said that the back becomes stronger after the tail is docked; that the back receives the blood which formerly went to the tail. There is no truth in this. The small quantity of blood which is saved can be furnished by one or two additional ounces of corn, and there is not the slightest proof that the back becomes stronger.

Some writers have contended that the tail of the horse, like that of the greyhound or the kangaroo, assists him in turning, in the same way that a helm guides a ship. Whether this be true or not, there can be no doubt about the utility of the tail in keeping off flies, which to some horses give extreme torment. I have heard or read of a troop of cavalry employed, I think, in some part of India, that was quite useless in consequence of the annoyance the docked horses received from a large species of fly. In this country, for two months of the year, thin-skinned horses suffer excessively, and many accidents happen from their struggles or their fears. At grass they are in a constant fever.

It is surely worth while inquiring, whether all that is gained by docking balances the loss. In comparing the two, it ought to be remembered that lock-jaw and death are not rare results of the operation.

Nicking.—In England and Scotland, this operation appears to be fast and justly getting into disrepute. It is still very common in all parts of Ireland. Its object is to make the horse carry his tail well elevated. Two or three deep incisions are made on the lower surface of the tail; the muscles by which it is depressed are divided, and a portion of them excised. The wounds are kept open for several days, and the tail is kept in elevation by means of pulleys and a weight. It is a surgical operation, but no respectable veterinarian would recommend it. It need not be described here. On the continent, a tail thus mutilated is termed *Queue à l'Anglaise*, in compliment, I suppose, to the English.

There is a safer and more humane method of attaining the same object. If the horse do not carry his tail to his rider's satisfaction, it may be put in the pulleys an hour or two every day for several successive weeks.

A cord is stretched across the stall, near or between the heel posts; the hair of the tail is plaited and attached to another cord, which passes upward, over a pulley in the transverse line, stretches backward, where it passes through another pulley and descends. To this a weight is secured, a bag containing sand or shot sufficient to keep the tail at the proper elevation. A double pulley on the cross cord permits the horse to move from side to side

without twisting the tail. The weight should vary with the strength of the tail. From one to two pounds is sufficient to begin with. After a few days it may be gradually increased, so as to keep the tail a little more elevated than the horse is wonted to carry it. The time which he stands in the pulleys need not in the first week exceed one hour; on the second week he may stand thus for two or three hours every day, and at last he may be kept up all day, or all night, if the horse be at work during the day. Should the tail become hot or tender, or should the hair show any tendency to fall out, the elevating process must be omitted for a day or two, till the tail be well again, when it may be resumed and carried on every day, unless the hair again become loose, which is a sign that the weight is too great, or too long continued.

From this operation there is no danger of the horse dying of lock-jaw, nor of the tail being set awry, nor broken, as sometimes happens after nicking. It requires a much longer period to effect the elevation, but that is of no consequence, since the horse need not be a single day off work. When nicked he must be idle for several weeks.

BEDDING.—To a hard working horse, a good bed is almost as essential as food. Many stablemen cannot make it. It should be as level and equal as a mattress. There should be no lumps in the litter; it should come well back, and slope from each side, and from the head towards the center. Farm servants and carters never give the horse a good bed, although their horses need it fully as much as any other. They generally have the litter all in a heap, or in a number of heaps, upon which the horse cannot lie comfortable for more than half an hour. The efforts such a bulky animal must make to rise and change his position, completely awakens him. His rest is broken, and his vigor never fairly recruited. Now, it is not difficult to make a good bed; any body with hands may learn it in a few days. But no one thinks of learning such a thing. Those who become expert at it cannot help their expertness. They never tried to obtain it; practice gave it to them before they knew it was of any use. But for all this it may be learned. Show the man how to use the fork, and how to spread the litter; give him a pattern bed in one stall, and make him work in the next two hours every day, for a week. If he cannot learn it in this time—the operation is really worth such trouble—the man will never learn any thing.

While the old litter is not in sufficient quantity to produce any sensible impurity of the air, it can only be called a slovenly, not a pernicious practice. But the stables of farmers and carters are in general too bad. Their horses never have a decent bed. There are no fixed times for changing the litter. When it becomes so wet and filthy that the keeper is somewhat ashamed to see it, he throws down some fresh straw to conceal that which ought to be taken away. That is done, perhaps, every day; but it is not till the horse is standing fetlock deep in a reeking dunghill, that the stall is cleaned to the bottom.

Upon such a bed the horse can never obtain unbroken rest; and the stable can never be comfortable. The noxious vapors arising from the rotting litter, are destructive to the eyes, the lungs, and to the general health or strength. When there is a circulation of air sufficient to carry off these vapors, the stable is cold. While the horse is lying, the cold air is blowing over him on the one side, and the dunghill is roasting him on the other.

This is an old practice, and of course not to be abandoned without a struggle. The farmer contends that it is the right way to make good manure, and the carter that it saves the consumption of straw. Manure may be made in this way, perhaps, well enough; but horses are surely not kept for that purpose. Visit the stables of those who have been successful farmers. See how they contrive to obtain manure. For the poor carter, who cannot afford to give his horse a comfortable bed, there is no remedy unless he can learn to live without quite so much whiskey.

COLIC IN THE HORSE.

EDITORS OF THE CULTIVATOR—In your number for this month, I notice an article on "Colic in the Horse," and it gives me much pleasure to be able to concur with you most fully in regard to the severity and danger of the disease; and for the most part also in the treatment, which, so far as it goes, is in every respect unexceptionable; and I think it not improbable that when resorted to in proper season, will, as Mr. Stewart believes, succeed in eight cases out of nine.

The ninth horse however, ought to be saved if possible, and I as freely believe that this last object may be attained in every true case of colic, as that the first eight will be saved by the remedies proposed. I cannot agree with you that the first object in the treatment is to arrest the fermentation, or that this is a primary cause of colic, believing it to be only one of the consequences. However this may be, I would rather say that the first object is to allay the pain—to relieve that excruciating agony which is, I apprehend, the very first morbid change which takes place in colic, and which being suspended, all other morbid phenomena subside of course, unless disorganization of the intestines has already taken place. This object can always be attained by the proper use of opium—exhibited either alone or in combination with

the stimulants advised by Mr. Stewart. These last, however, I should think might be essential when there are evident symptoms of exhaustion and prostration of strength.

In cases of much severity, two ounces of a saturated tincture of opium, (laudanum,) may be given every half hour, till the pain is relieved, and if the symptoms are peculiarly distressing, three ounces may be given once in 20 minutes.

If the belly is distended and very hard, a moderate bleeding may be conjoined with this treatment with advantage.

I have known 8 ounces of laudanum exhibited in two hours, with perfect relief in a case of great severity, when all other remedies had failed of even mitigating the symptoms. Very respectfully,

East Windsor, May 20, 1843.

H. WATSON.

ALTERING COLTS.

EDITORS OF THE CULTIVATOR—The treatment of animals has arrested my attention from the time when as a boy, I have witnessed, in the lower part of this state and S. Carolina, the yearly collection of marsh tacks, calves, &c., for the purpose of marking, branding, cutting out the lampas, emasculating, docking, &c., and to this time I have hailed with pleasure any improvement, especially in the treatment of that noble animal, the Horse. By degrees I have seen the barbarous practice of burning out the lampas and cutting out the hooks, give way, at least among the enlightened, to the more rational, and I think more curative practice of depletion and change of food.

And now, having witnessed, I am induced to describe to you an improvement in the emasculation of the horse, which strikes me as being well worthy of being generally known.

When I came to this neighborhood a few years ago, I was told of a man who performed the operation without tying the horse in any way, and I am free to confess that I thought it was a mistake; but now, to me, seeing is believing, although it yet appears strange. Being at the house of a friend on Saturday last, I had an opportunity of seeing the performance under the following circumstances:

A three years old colt, with a simple bridle on, was backed into the corner of a worm rail fence, where he was held by a youth of sixteen, without any other restraint than the bridle and fence. The operator approached the animal with the same calm sang froid that an old bee-master handles a hive which he is about to rob of its honey; going to the right side, he laid hold of the bag with the left hand, and with the right laid open one testicle, and separated it in the usual way; and then did the same with the other, and so left them without any ligature; he then enlarged the opening in the envelop skin so that all the blood which came might freely fall off; a spoonful of lard and salt was then laid in to prevent an accumulation of coagulated blood on the parts, and he was then unbridled and turned loose. During the operation, there were no great efforts made by the horse to get away, and he was easily held in by the bridle; he appeared to incline towards the operator, as horses frequently do when they are tickled by the curry-comb; and once or twice he threw up the near hind leg as if to drive off a fly. There were no evidences of his suffering pain, such as groaning or the like. The man said he had operated on hundreds, and never lost one, or had been kicked but by one, and was successful with either old or young horses.

A. S.

Oakland Farm, near Lebanon, Cobb co., Geo., 1843.

SPAYING SWINE.

Messrs. GAYLORD & TUCKER—I have seen several directions given for spaying swine; none however, I think, superior to mine, which is as follows: I have a crooked stick, in the form of the arm when half bent, about 18 inches long; to each end I attach a string, doubled, about 8 or 10 inches long, which I put in a noose over the hind legs, just above the hocks; hang them up head downward; tie the mouth to prevent squealing; let a boy stand at their back and hold the fore legs. I then with a sharp knife split the belly just between the hind four teats, sufficient to insert two or three fingers of the left hand, draw out the pride, and cut it off with the knife in the right hand; then with a large crooked needle and waxed thread, sow up the wound in the following manner: stick the needle through from outside to inside, then bring out the needle on the other side of the wound, from inside to outside; cut off the thread sufficiently long to tie; repeat the same so as to make three stitches; then tie them, being careful not to draw the stitches too tight, and the work is done. I believe I can spay as many in a given length of time and with as little loss, as any man can any other way.

JOHN M. JOHNSON.

Hannibal, Mo., May 25, 1843.

MANGE OR MAD ITCH IN SWINE.—A correspondent of the Maine Farmer recommends the following: "Take raw tobacco steeped cold and strong in chamber lie, pour off the clear liquor, then mix it, equal parts, with lamp oil, and then rub on the composition. It is a safe and sovereign remedy for mange, in all stages and all animals, brute or human. This ointment, if kept in a tight bottle, will keep good any length of time. It should be well shaken together when used, for the parts soon separate when standing."

Domestic Economy.

BUTTER MAKING.

MESSRS. GAYLORD & TUCKER—I observed in your last paper, that some lady is desirous of obtaining particular information in regard to the process of making, and management of butter. For fear that those actively engaged in the employment, may not take time to satisfy her inquiries, I have concluded to give her and her "neighbors" my own ideas on the subject, derived from past experience.

Some thirteen or fourteen years ago, with but little more knowledge of the matter than your correspondent professes to have, I undertook the charge of a small dairy. I found there was an English dairy woman in the neighborhood, whose butter was the criterion by which all other butter was judged, when submitted to the epicures in that article. With the aid of her friendly instructions, and such books on the subject as I could resort to, a satisfactory result was soon obtained.

The first requisite to the production of good butter is good cows. By good cows, I mean those that will give plenty of such milk as will yield a large quantity of good butter. It is a well known fact that cows running in the same pasture, or fed precisely alike, will afford butter varying much in quality. A poor cow is more injury to the dairy than she is worth, and should therefore be rejected. I have always observed that cows which gave the richest milk, generally have soft, velvet-like yellow skins. I will not say of what tint the hair should be, as I should not like to commit myself on the long vexed and important question of color.

Cows, to yield good butter, as every farmer and dairy woman knows, should have good keeping. Plenty of good succulent food, both in summer and winter.

The Dairy House should be cool and airy, commanding plenty of pure cold water, either by a running stream, or by pipes laid from a well; ice, too, is an excellent auxiliary. Wood or stone troughs, which can be kept full of water, are very good to set the pans of milk in.

Great care should be taken that every thing connected with the dairy, should be managed with the most scrupulous neatness.

If milking is done but twice a day, the time should be divided as nearly equal as convenient. The milk should be carried to the place where the dairy work is done, immediately strained, and left a short time for the warm steam to pass off, before it is carried into the dairy.

Of all the pans I have used, I much prefer the tin. They are lighter, less expensive in the end, and easier kept clean. Zinc is not fit to keep milk in at all, as a slight degree of acidity decomposes a certain portion of the zinc. From 24 to 48 hours is sufficient time for the milk to stand before skimming. I should much prefer that milk should never sour before the cream is taken off. Some persons think it highly important that cream should acquire a certain degree of acidity before churning, but I can confidently affirm that the best butter I ever made, was from cream that was perfectly sweet when the churning was commenced. The remarks of a writer in a late number of the "Maine Farmer," so exactly coincide with my own views, that I will give them in his own language:

"Butter is an article which is very ready to receive a flavor from any gas, or from contact with other substances, unless it is entirely freed from every particle of its mucilage." He says further, that "the mottled or streaked appearance in butter, is owing to the coagulated lymph, coagulated from souring; it is indissoluble in water, and can never be worked out of the butter. Salt should not be added at the commencement of the first working, as it is known to every housewife that salt will curdle sour buttermilk, and should also be known that curd once formed in with butter, can never be worked out. They can work out the whey and leave the butter apparently dry, but the cause of the mischief is still left. Incipient decay has already commenced in the coagulum or curd, and will proceed, unless something can be applied that will put an entire stop to it."

The frequency of churning may be regulated according to the quantity of cream and state of the weather.* The best churn for a moderate sized dairy, that I have any knowledge of, is "Gault's Patent." It operates easily and effectually. It may be had of Ruggles, Nourse & Mason, Boston, and probably at other implement stores. In the largest size, from one to twenty-five pounds of butter can be made at a time.

Experience has led me to deprecate the practice of washing butter, when it can possibly be managed without. Butter that comes so soft as to require cold water to harden it, cannot by washing, be made to keep sweet any length of time. When the butter is taken from the churn, and the buttermilk worked out, put in 1½ oz. best salt to one pound of fresh butter; or if the buttermilk is not well worked out, more salt will be needed. Set it away in mass for 24 hours in a cool place, when every particle of moisture should be extracted, and the butter made into rolls or prints for use. For this purpose, a flat smooth board or marble slab is necessary; a flat surface is preferable to a dish, as you can so much more easily get rid of the moisture from the butter. Some use a wooden slice or spatula, to handle the butter with; this requires more strength, especially if the butter is hard, than is required by the use of the hand alone. To

* In cold weather the cream should be brought to the fire sometime before churning. I think about 65° Fahrenheit, is about the right temperature.

prepare the hands for working butter, rub them well with wet corn meal, then wash in water as hot as can be borne, plunge them in cold water for a moment, and you are ready to handle butter in the warmest weather without melting it, if it is done early in the morning, before the hands get heated by exercise.

Butter for keeping, should be made when the weather is cool. To every pound of fresh butter, add 1½ oz. best salt, and ½ oz. saltpetre, taking particular care to extract every particle of moisture, as on this mainly depends the future excellence of the article. Pack close in stone jars. Doubtless every one has observed when butter is not well worked, the watery particles diffuse through it, destroying that waxy appearance so much prized by lovers of good butter.

Salt should never be used for butter without sifting; it is extremely disagreeable to encounter lumps of salt, either in spreading or eating what should be such a luxury.

Winter butter can be made as good in color and consistence, as at any other season of the year. This assertion will perhaps appear strange to some of my neighbors, as the bad quality of the butter in our market, has been a subject of continual complaint and inquiry during the past winter. To find one of the causes, no one need go far. Let him only ride 20 miles in any direction, during the severe winter just past, and he would have seen hundreds of these poor abused creatures, the cows, standing around, (not even permitted to enter,) the log barns which appear to have been made expressly for free ventilation, chewing the cud, not of "sweet and bitter fancy," but some old dry cornstalk, or perchance, if so fortunate as to have a saw mill in their vicinity, a nice strip of bark gnawed from a log that had lain in water till sour and half rotten; looking for all the world as if they could give their owner more tears than milk. This is no "fancy sketch"—and now, need one ask why the butter is poor?

With good cows, well fed, and a place to raise the cream without freezing, there is no difficulty in the matter. If the natural richness of the milk does not impart sufficient color, take deep colored carrots, (the Altringham is best,) grate fine, pour boiling water on the pulp, and strain into the cream till sufficiently colored; so far from imparting a carotyl taste, it gives additional sweetness and richness to the butter. Yolks of eggs beaten up, two to a gallon of cream, do very well. These are the only coloring materials I ever used.

I have extended this communication to a greater length than I intended, and if I have been led into prolixity, (which, by the way, I detest,) a desire to assist beginners, for whom I have written, must be my apology. Should any experienced dairy woman be in possession of important facts on this, or any other subject, which are not familiar to all, I hope she will not withhold them from your readers.

Zanesville, O., May 30, 1843.

MESSRS. GAYLORD & TUCKER—Reading the Cultivator last evening, I saw a request that some one would furnish an article on making butter. The following is at your disposal. There is a great deficiency in the art of taking care of milk and making good butter. Many think they must have Durham cows or Goshen milk sellers, or they cannot make butter to command a high price; but I know from experience, that this is not the case. My butter always commands a high price and ready sale. I think the sisters will not be offended if I write a little, seeing men have wrote so much on the subject. One man wrote a piece sometime ago, without fear of contradiction, that washing butter was the best mode of cleansing it. Good butter can be made without cold water. I don't use any about my butter. I skim my milk as soon as it begins to sour, and churn very often. When churned, I scrape it down with my hand, take it out with a ladle, salt it well, and put it in the cellar till morning. I always churn at night, then work out all the buttermilk I can, and put it away till I get two or three churnings, then work it over again and pack it down—turn on strong brine two or three inches deep. This I turn off and on, as often as I want to lay down, till my tub is filled. Keep on the brine, and make butter this way, and you will not have to use cold water to wash out the sour milk; but let me tell you, if you want to make good butter and a good deal of it, you must see to it yourself—hired help will not. You must have plenty of pans—strain them half full—you will get a great deal more cream than in any other way. This I know from experience. I scald my pans and pails in boiling water. Our cows are milked early at night and early in the morning, so to divide time equally. My cream is kept in the cellar, churned at night in a cool place. I weigh my butter when I work it over. I made last season from three cows, seven hundred and fifty-three pounds of butter; sold five hundred and sixty for 12½ and 10 cents per pound, in Hamilton village. We raised three calves, and made some cheese. Cows, common breed; one eight, and two four years old. If any one can beat me in quality or quantity, I would like to see it—by washing or any other process. Ladies take courage. This season see what you can do. Don't let Durhams and Herefords beat us. For my part I don't believe they are what they are cracked up to be. If farmers would take more pains to have good feed for their cows, they would be well paid for their trouble. Our cows were pastured on four acres of seed clover till after feed. I think the old fashioned churn the best; tin pans likewise. Keep your cellar free from air if you want it cool.

L. B., A FARMER'S WIFE.
Earlville, N. Y., May 12, 1843.

The Garden and the Orchard.

BASSANO BEET.

In compliance with the request of the Editors of the Cultivator, I can inform them that I have cultivated this beet for the two past years, and consider it decidedly the best beet for table use which I know. The roots are as flat as the flat Norfolk turnep, and grow as large; often eight inches in diameter on fertile soil. They grow mostly above ground, and are consequently easily gathered. They suffer less by being crowded than any other root I am acquainted with, often attaining considerable size when growing in actual contact. As an early beet, it is very excellent; and it may prove one of the best field crops we can cultivate. Specimens were exhibited at the State Fair at Albany.

J. J. T.
Macedon, N. Y., 1843.

NEW MODE OF GRAFTING.

EDITORS OF CULTIVATOR—Mr. C. L. Whiting of Granville, showed me a mode of grafting which I do not recollect having before heard of. It was done by taking young trees or sprouts from the root or stump of a tree, of the size of the finger, splitting them through the center at intervals of a foot or so, inserting scions in these splits at right angles with the tree, and then bending down the tree and covering it slightly with earth—leaving above the surface two or three buds of the scions, and leaving out, also, a few inches of the top of the tree. Thus fixed, it is said each scion will become a tree, and when sufficiently grown, may be taken out and transplanted. Mr. Whiting showed me several apple trees which had been grafted in this way, one of which had some half dozen pear scions in it, that all appeared growing well.

PROTECTING TREES FROM CATTLE AND HORSES.

MESSRS. GAYLORD & TUCKER—It not unfrequently happens when trees are taken from the nursery or from the forest to be transplanted, that we are obliged to set them where cattle and horses can reach them. To prevent them from injuring them, if they are small, I drive a stake firmly by their side, and nail a piece of basswood bark fast to the stake, with the inside of the bark towards the tree. I then twist a band of hay or grass and braid it around the tree, commencing at the top of the bark, in order to prevent the tree from wearing against the bark as it curls around it. If the barks are green they will need no binding, for the influence of the sun will soon fasten them.

S. E. T.
Lansing, Tompkins co., N. Y., 1843.

SALT FOR THE CURCULIO.

WE copy the following from Hovey's "Magazine of Horticulture," for June. The suggestions are well worthy of consideration:

"Now that the season is approaching when the Curculio begins to emerge from the ground, we are induced to request fruit cultivators to try the effect of salt in destroying them. We have been assured by several experienced fruit cultivators, that they have found salt a perfect preventive against the ravages of this destructive insect, and that they have had annually good crops of plums, while their neighbors have lost a large portion of their fruit. Our friend, Capt. Lovett of Beverly, informs us that he has applied half a peck or more of salt to each tree, spreading it on the ground as far as the branches extend. This is done about the first of June, and as it is washed into the ground by the rains, it appears to prevent the Curculio from making his way alive through it. The salt does not appear to injure the tree in the least. We would advise all our friends who have plum trees subject to the attacks of the Curculio, to try this remedy, and send us an account of their experiments for publication, in order that all the information possible may be elicited which may lead to a certain remedy for this insidious enemy of the plum cultivator."

VERMIN ON VINES.—We hope our gardeners will make various trials this summer, to destroy the bugs and worms that are so officious among garden plants. Charcoal dust can be readily procured in most places, and this article is beneficial to the plants in several ways—it improves the soil by attracting nitrous substances, and it raises the temperature about the plants around which it is placed, since the rays from the sun are not reflected back as they are from light colored substances. But charcoal dust is always offensive to insects and grubs, and though it may not kill them, it will drive them away. A little may be sifted over the plants every day or two, and we incline to think that charcoal will prove to be as good an article as any that has been recommended for garden plants.—Mass. Plowman.

QUINCE TREES.—These should be pruned but little where the limbs ride; should be watered with strong soap suds; have ashes placed about them three times in the course of the season. Those branches which grow very near the ground, may be laid down and covered with earth five or six inches deep, leaving six inches or a foot, or more, according to the length of the limb. Thus you can obtain new trees, to be taken up and transplanted next spring.—Farmer's Advocate.

